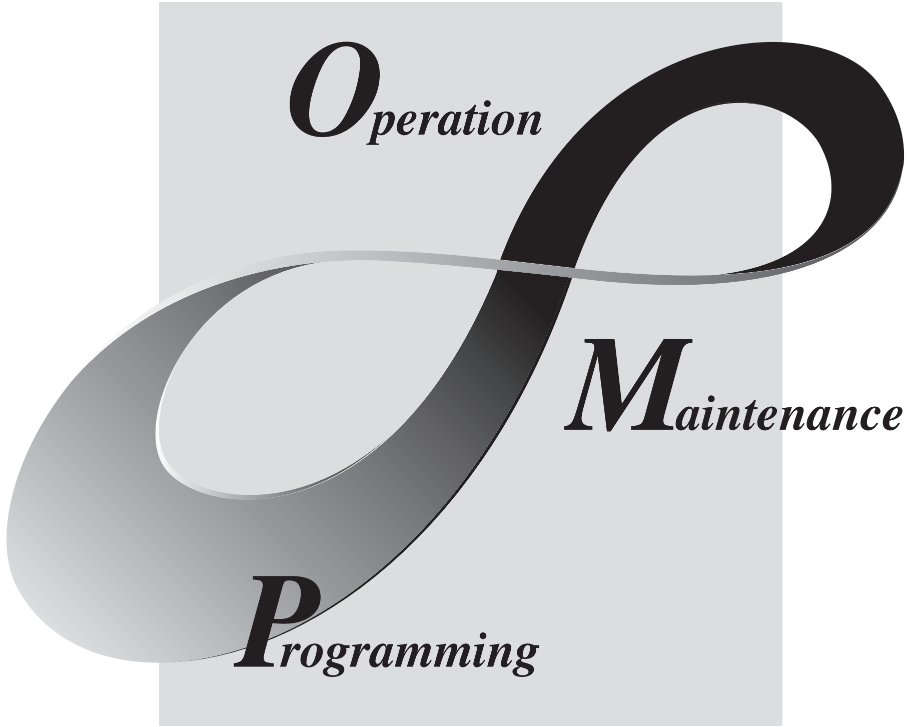
GX Configurator-QP Version 2

Operating Manual

MITSUBISHI

MELSOFT



MELSOFT
Integrated FA Software

SW2D5C-QD75P-E

• SAFETY PRECAUTIONS •

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.
The precautions given in this manual are concerned with this product only. For the safety precautions of the programmable controller system, refer to the user's manual for the CPU module User's Manual.

In this manual, the safety precautions are classified into two levels: "⚠WARNING" and "⚠CAUTION".

⚠ WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠ CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠CAUTION" may lead to serious consequences.
Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Start-Up/Maintenance Precautions]

⚠ CAUTION

- Before performing the OPR, JOG operation, inching operation, positioning data test or other operation in the test mode, read the manual carefully, fully ensure safety, and set the programmable controller CPU to STOP.
  Not doing so can damage the machine or cause an accident due to misoperation.

• CONDITIONS OF USE FOR THE PRODUCT •

(1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
("Prohibited Application")
Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

REVISIONS

* The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
Jun., 2001	SH (NA)-080172-A	First edition
Sep., 2001	SH (NA)-080172-B	Modifications CONTENTS, Section 4.1.1, Section 4.1.2, Section 4.2, INDEX
Feb., 2002	SH (NA)-080172-C	Modifications ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Section 2.2, Section 3.2, Section 5.1, Section 8.2, Section 11.1.3, Section 11.2.1, Appendix 3
Aug., 2002	SH (NA)-080172-D	Modifications SOFTWARE USER REGISTRATION, CONTENTS, Section 1.1, Section 2.1, Section 2.2, Section 3.2, Section 4.2, Section 5.1, Section 5.2, Section 6.1, Section 6.3, Section 6.6.2, Section 7.1, Section 7.2, Section 7.4, Section 8.2, Section 8.3.1, Section 8.3.2, Section 8.5.1, Section 8.5.2, Section 9.1, Section 10.1, Section 10.2.1, Section 10.2.5, Section 10.2.6, Section 10.3.2, Section 10.4.1 to Section 10.4.5, Section 11.1.4, Section 11.2.1 to Section 11.2.3, Section 11.4, Section 11.6.2, Section 11.7.2, Section 11.8.2, Appendix 2, Appendix 3
Feb., 2003	SH (NA)-080172-E	Modifications CONTENTS, ABOUT MANUALS, Section 2.1, Section 2.2, Section 4.1.2, Section 4.1.3, Section 4.2, Section 4.3, Appendix 3, INDEX
May., 2004	SH (NA)-080172-F	Modifications SOFTWARE USER REGISTRATION, Section 2.1, Section 2.2, Section 6.3, Section 8.2, Section 10.2.5, Section 10.4, Section 11.6.2, INDEX
Mar., 2005	SH (NA)-080172-G	Modifications ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Chapter 1, Section 1.1, Section 2.1, Section 3.1, Chapter 6, Section 6.1, Section 6.6.1, Section 7.4, Section 8.2, Section 8.3.1, Section 10.2.4 to Section 10.2.6, Section 10.5, Section 11.1.2, Section 11.1.3, Section 11.4, Section 11.6.2, Section 11.8, Section 11.9, Appendix 1 to Appendix3 Addition Section 2.3
May, 2007	SH (NA)-080172-H	Modifications ABOUT MANUALS, ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Chapter 1, Section 2.1, Section 11.1.3, Appendix 3
Jan., 2008	SH (NA)-080172-I	Modifications ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Section 2.1, Section 4.1.2, Section 4.1.3, Section 4.2, Section 4.3, Section 11.10, Appendix 3
Apr., 2008	SH (NA)-080172-J	Modifications ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Chapter 1, Section 2.1, Section 3.1, Chapter 6, Section 7.1, Section 8.2, Section 10.2.6, Section 11.1.3, Appendix 3
Oct., 2008	SH (NA)-080172-K	Modifications Chapter 1, Section 2.1, Section 7.1, Section 8.2, Section 11.1.3, Appendix 3

Print Date	* Manual Number	Revision
Mar., 2009	SH (NA)-080172-L	Modifications ABOUT MANUALS, ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Chapter 1, Section 2.1, Section 2.3, Section 4.1.2, Section 7.1, Appendix 3 Addition Section 7.1.1
Apr., 2010	SH (NA)-080172-M	Modifications SAFETY PRECAUTIONS, SOFTWARE USER REGISTRATION, ABOUT MANUALS, ABOUT THE GENERIC TERMS AND ABBREVIATIONS, PACKING LIST, Chapter 1, Section 1.1, 2.1, 2.2, 2.3, 3.1, 4.1.2, 4.1.3, 4.1.4, 4.2, 4.3, 5.1, 5.2, Chapter 6, Section 6.1, 6.6.1, 6.6.2, Chapter 7, Section 7.1, 7.1.1, 7.2, 7.3, 7.4, Chapter 8, Section 8.1, 8.2, 8.3, 8.6, Chapter 9, Section 9.1, 9.2, 9.3, 9.4, Chapter 10, Section 10.1, 10.2.1 to 10.2.6, 10.3.2, 10.4, 10.4.1 to 10.4.5, 10.5, 11.1.2, 11.1.3, 11.1.4, 11.2.1, 11.2.2, 11.2.4, 11.4, 11.5, 11.7, 11.7.1, 11.7.2, 11.8, 11.8.1, 11.8.2, 11.9, 11.9.1, 11.9.2, 11.10, Appendix 1 to 3, INDEX Addition CONDITIONS OF USE FOR THE PRODUCT
Apr., 2011	SH (NA)-080172-N	Modifications SAFETY PRECAUTIONS, ABOUT MANUALS, ABOUT THE GENERIC TERMS AND ABBREVIATIONS, Section 2.1, Section 2.2, Section 4.1.2, Appendix 3
May, 2012	SH (NA)-080172-O	Modifications Section 2.2, Section 11.8.2

Japanese Manual Version SH-080137-R

INTRODUCTION

Thank you for choosing the Mitsubishi MELSOFT Series Integrated FA software.
Read this manual and make sure you understand the functions and performance of MELSOFT series thoroughly in advance to ensure correct use.

CONTENTS

6. PROJECT CREATION 6- 1 to 6-18

7. SYSTEM CHECKING FROM PERIPHERAL DEVICE 7- 1 to 7-12

8. DATA SETTING 8- 1 to 8-20

9. WRITING TO/READING OF/VERIFICATION OF POSITIONING MODULE DATA 9- 1 to 9- 7

10. POSITIONING DEBUGGING 10- 1 to 10-42

ABOUT MANUALS

The following manuals are related to this product.

Refer to the following table and request the required ones.

Related Manuals

Manual Name	Manual Number (Model Code)
Type QD75P/QD75D Positioning Module User's Manual Describes the system configuration, performance specifications, functions, handling, pre-operation procedures and troubleshooting of the QD75P1/QD75P2/QD75P4 and QD75D1/QD75D2/QD75D4. (Sold separately)	SH-080058 (13JR09)
Type QD75M Positioning Module User's Manual (Details) Describes the system configuration, performance specifications, functions, handling, pre-operation procedures and troubleshooting of the QD75M1/QD75M2/QD75M4. (Sold separately)	IB-0300062 (1XB752)
Type QD75MH Positioning Module User's Manual (Details) Describes the system configuration, performance specifications, functions, handling, pre-operation procedures and troubleshooting of the QD75MH1/QD75MH2/QD75MH4. (Sold separately)	IB-0300117 (1XB917)
MELSEC-L LD75P/LD75D Positioning Module User's Manual Describes the system configuration, performance specifications, functions, handling, pre-operation procedures and troubleshooting of the LD75P4/LD75D4. (Sold separately)	SH-080911ENG (13JZ46)
MELSEC-L LD77MH Simple Motion Module User's Manual (Positioning Control) Describes the system configuration, performance specifications, functions, handling, pre-operation procedures and troubleshooting of the LD77MH4. (Sold separately)	IB-0300172 (1XB942)
Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/O network) This manual describes the system configuration of MELSECNET/H network system (Remote I/O network), performance, specifications and programming. (Sold separately)	SH-080124 (13JF96)
GOT1000 Series Connection Manual (Mitsubishi Products) Describes the system configuration for connection type and cable wiring applicable to GOT1000 series. (Sold separately)	SH-080868ENG (1D7MC2)

HOW TO USE THIS MANUAL

PURPOSE

Purpose of operation explained in each chapter, section or paragraph.

BASIC OPERATION

Operation to be performed until the actual operation screen appears.

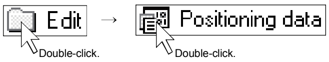
8.3.2 M code comment

PURPOSE

Set comments to M codes which are required for control exercised in synchronization with positioning.
M code comments are data which can be saved only on the peripheral device.
Up to 50 comments can be set for each axis.

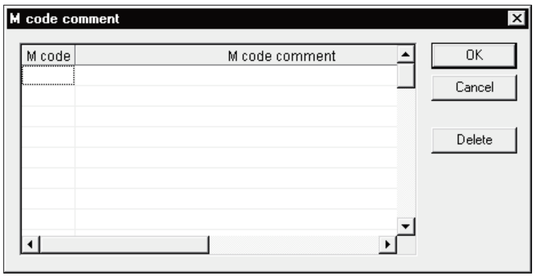
BASIC OPERATION

1. Choose the positioning data of the axis to which the M code comments will be set.



2. Click the [Edit] → [M code comment] menu.
3. Set the M code comments.
4. To exit, click the "OK" button in the M code comment dialog box.

DISPLAY/SETTING SCREEN



DISPLAY/SETTING DATA

Item	Description
M code	Set the M code No. to be commented.
M code comment	Set a comment of up to 32 characters. Up to 50 comments can be set for each axis.
"OK" button	Click this button to finish the setting.
"Delete" button	Click this button to delete the comment chosen.

DISPLAY/SETTING SCREEN

Screen used to make setting or provide display for the purpose being described.

DISPLAY/SETTING DATA

Explains the display/setting screen items.

In addition, there are also the following explanations.

HELPFUL OPERATION

Describes application operation if there are multiple purposes and the basic operation and display/setting data do not provide enough information.

HELPFUL CORRECTIVE ACTIONS

Explains corrective actions if monitored data is abnormal or a test cannot be made.

Point

Provides information relevant to that page, e.g. the items you should be careful of and the functions you should know.

The following table lists the symbols used in this manual and their definitions.

Symbol	Description
[ ]	Represents the menu name of the menu bar. If the menu name differs among Axes #1 to #4, they are indicated #1 to #4. [ ] → [ ] indicates a drop-down menu. Example: [Project] → [New Project] menu [Online] → [Test] → [Operation test #1 to #4] menu
( )	Represents the tool button on the toolbar corresponding to the drop-down menu. If the button differs among Axes #1 to #4, the buttons of #1 to #4 are indicated. Example: [Project] → [Save Project] menu (💾) [Online] → [Test] → [M code off] → [M code #1 to #4 off] menu (▮ to ▮)
" "	Represents the item name or command button in the dialog box. Example: "OK" button
<< >>	Represents the tab in the dialog box. Example: <<Basic Parameter 1>> tab

ABOUT THE GENERIC TERMS AND ABBREVIATIONS

The following generic terms and abbreviations for the software for positioning module, positioning modules, etc. are used in this manual.

Generic Term/Abbreviation	Description
GX Configurator-QP	Generic product name for type SW2D5C-QD75P-E, SW2D5C-QD75P-EA and SW2D5C-QD75P-EV -EA means a multiple license product and -EV an update-only product.
GX Configurator-AP	Generic product name for type SW0D5C-AD75P-E and SW0D5C-AD75P-EA -EA means a multiple license product.
GX Developer	Abbreviation for GX Developer (SW4D5C-GPPW-E or later)
SW1□-AD75P	Generic term for SW1RX-AD75P, SW1NX-AD75P, SW1IVD-AD75P(-E) positioning module software packages for MELSEC-A series
Peripheral device	Generic term for personal computers and personal computer CPU modules on which GX Configurator-QP may be used
QD75P	Generic term for type QD75P1, QD75P2 and QD75P4 positioning modules
QD75D	Generic term for type QD75D1, QD75D2 and QD75D4 positioning modules
QD75M	Generic term for type QD75M1, QD75M2 and QD75M4 positioning modules
QD75MH	Generic term for type QD75MH1, QD75MH2 and QD75MH4 positioning modules
QD75	Generic term for type QD75P, QD75D, QD75M and QD75MH positioning modules
LD75	Generic term for type LD75P4 and LD75D4 positioning modules
LD77	Another term for type LD77MH4 simple motion module
Positioning module	Generic term for type QD75 and LD75 positioning modules and type LD77 simple motion modules
AD75P	Generic term for type AD75P1, AD75P2 and AD75P3, A1SD75P1, A1SD75P2, A1SD75P3, AD75P1-S3, AD75P2-S3, AD75P3-S3, A1SD75P1-S3, A1SD75P2-S3, A1SD75P3-S3 and AJ65BT-D75P2-S3 positioning modules
AD75M	Generic term for type AD75M1, AD75M2, AD75M3, A1SD75M1, A1SD75M2 and A1SD75M3 positioning modules
AD75	Generic term for MELSEC-A series positioning modules that may be used with GX Configurator-AP
QCPU	Generic term for Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU, Q01UCPU, Q02CPU, Q02HCPU, Q02PHCPU, Q02UCPU, Q03UDCPU, Q03UDECPU, Q04UDHCPU, Q04UDEHCPU, Q06HCPU, Q06PHCPU, Q06UDHCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q12HCPU, Q12PHCPU, Q13UDHCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q25HCPU, Q25PHCPU, Q26UDHCPU, and Q26UDEHCPU
LCPU	Generic term for L02CPU and L26CPU-BT
Universal model QCPU	Generic term for Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, and Q26UDEHCPU
Built-in Ethernet port QCPU	Generic term for Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, and Q26UDEHCPU
Programmable controller CPU	Generic term for programmable controller CPU on which a positioning module can be mounted
Serial communication module	Generic term for Q corresponding serial communication module and L corresponding serial communication module
PC CPU module	Abbreviation for MELSEC-Q series compatible PC CPU module (CONTEC CO., LTD. make)
Servo amplifier	Generic term for drive units connected to the positioning module
Servo motor	Generic term for motors connected to the drive units (servo amplifiers)
Positioning control system	Generic term for equipment sets which exercise positioning control, including the positioning modules, servo amplifiers, servo motors and external switches
1-license product	Abbreviation for 1-license product of GX Configurator-QP

(To the next page)

Generic Term/Abbreviation	Description
Multiple-license product	Abbreviation for multiple-license product of GX Configurator-QP
Update-only product	Abbreviation for update-only product of GX Configurator-QP
Windows® 7	Generic term for the following: Microsoft® Windows® 7 Starter Operating System, Microsoft® Windows® 7 Home Premium Operating System, Microsoft® Windows® 7 Professional Operating System, Microsoft® Windows® 7 Ultimate Operating System, Microsoft® Windows® 7 Enterprise Operating System Note that the 32-bit version is designated as "32-bit Windows® 7", and the 64-bit version is designated as "64-bit Windows® 7".
Windows Vista®	Generic term for the following: Microsoft® Windows Vista® Home Basic Operating System, Microsoft® Windows Vista® Home Premium Operating System, Microsoft® Windows Vista® Business Operating System, Microsoft® Windows Vista® Ultimate Operating System, Microsoft® Windows Vista® Enterprise Operating System
Windows® XP	Generic term for the following: Microsoft® Windows® XP Professional Operating System, Microsoft® Windows® XP Home Edition Operating System

PACKING LIST

This product consists of the following.

Type	Product Name	Quantity
SW2D5C-QD75P-E	GX Configurator-QP Version 2 (1-license product) (CD-ROM)	1
	End-user software license agreement	1
	Software registration notice	1
	License agreement	1
SW2D5C-QD75P-EA	GX Configurator-QP Version 2 (multiple-license product) (CD-ROM)	1
	End-user software license agreement	1
	Software registration notice	1
	License agreement	n*
SW2D5C-QD75P-EV	GX Configurator-QP Version 2 (update-only product) (CD-ROM)	1
	End-user software license agreement	1
	Software registration notice	1
	License agreement	1

* : Cards of the same quantity as the number of licenses are packed with the product.

1. OVERVIEW

This manual describes the functions and operating procedures of GX Configurator-QP. GX Configurator-QP is a software package that performs various functions such as data settings, monitoring, and tests for the MELSEC-Q/L series positioning modules.

GX Configurator-QP offers the following functions.

- Setting of positioning data and parameters
- Simulation using positioning data
- Read/write of data from/to positioning module
- Monitoring of positioning control status
- Test operation of positioning control
- Auto refresh setting between QCPU or LCPU devices and positioning module buffer memory

GX Configurator-QP can be used with any of the following positioning modules.

Positioning module type	Model	
	MELSEC-Q series	MELSEC-L series
Open collector output type	QD75P1, QD75P2, QD75P4	LD75P4
Differential driver output type	QD75D1, QD75D2, QD75D4	LD75D4
SSCNET connection type	QD75M1, QD75M2, QD75M4	-
SSCNETⅢ connection type	QD75MH1, QD75MH2, QD75MH4	LD77MH4

GX Configurator-QP can access the QD75 via any of the following modules.

Module type	Model
QCPU	Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU, Q01UCPU, Q02CPU, Q02HCPU, Q02PHCPU, Q02UCPU, Q03UDCPU, Q03UDECPU, Q04UDHCPU, Q04UDEHCPU, Q06HCPU, Q06PHCPU, Q06UDHCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q12HCPU, Q12PHCPU, Q13UDHCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q25HCPU, Q25PHCPU, Q26UDHCPU, and Q26UDEHCPU
Q corresponding serial communication module	QJ71C24(N), QJ71C24(N)-R2
Q corresponding MELSECNET/H network remote I/O module ＊	QJ72LP25-25, QJ72BR15, QJ72LP25G, QJ72LP25GE
C Controller module	Q12DCCPU-V

＊ : Only when connecting to the remote I/O module directly.

GX Configurator-QP can access the LD75/LD77 via any of the following modules.

Module type	Model
LCPU	L02CPU, L26CPU-BT
L corresponding serial communication module	LJ71C24, LJ71C24-R2

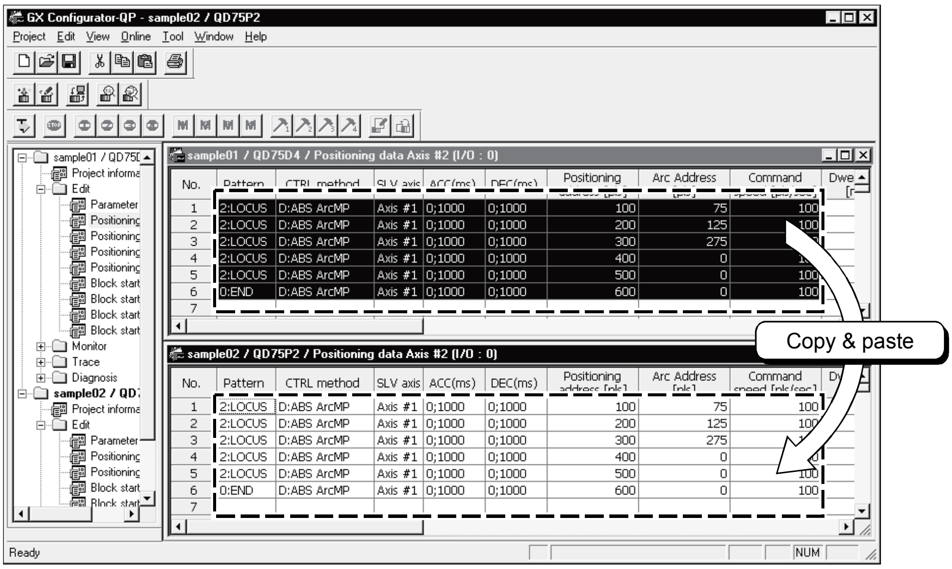
Point

GX Configurator-QP can simultaneously edit positioning module projects of MELSEC-Q series and MELSEC-L series.
Also, online operation in each project is available by specifying a connection target for each project.

1.1 Features

(1) Concurrent editing of multiple projects

Capable of opening multiple projects simultaneously, this software allows you to easily edit the positioning data and block start data to be utilized by copying and pasting.



sample01 / QD75D4 / Positioning data Axis #2 (I/O : 0)

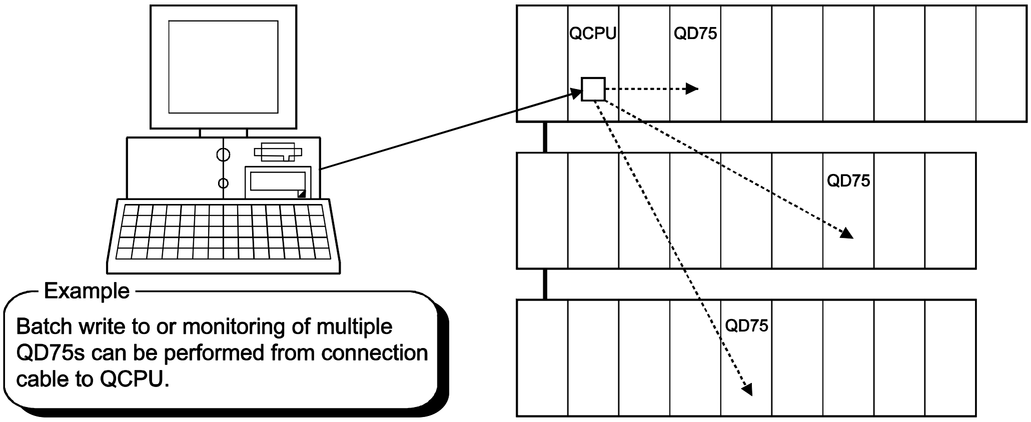
No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Address [pls]	Command speed [pls/sec]
1	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	100	75	100
2	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	200	125	100
3	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	300	275	[illegible]
4	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	400	0	[illegible]
5	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	500	0	100
6	0:END	D:ABS ArcMP	Axis #1	0;1000	0;1000	600	0	100
7								

sample02 / QD75P2 / Positioning data Axis #2 (I/O : 0)

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Address [pls]	Command speed [pls/sec]
1	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	100	75	100
2	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	200	125	100
3	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	300	275	[illegible]
4	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	400	0	[illegible]
5	2:LOCUS	D:ABS ArcMP	Axis #1	0;1000	0;1000	500	0	100
6	0:END	D:ABS ArcMP	Axis #1	0;1000	0;1000	600	0	100
7								

(2) Efficient debugging of multi-modules

Because the QD75/LD75/LD77 to be connected to is set per project, batch write to or monitoring of multi-modules can be performed.
When using multiple QD75/LD75/LD77s, you can reduce the software start waiting time and physical work time, increasing debugging efficiency.



Example

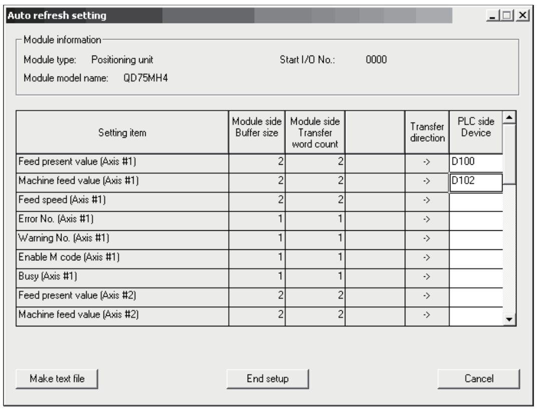
Batch write to or monitoring of multiple QD75s can be performed from connection cable to QCPU.

(3) Simplified program by auto refresh setting

Auto refresh setting is made to automatically read the following values stored in QD75/LD75/LD77 buffer memory to the QCPU/LCPU devices.

- Feed present value
- Machine feed value
- Feed speed
- Error No.
- Warning No.
- Enable M code

Auto refresh setting reduces the number of FROM instructions used to read the buffer memory storage values, facilitating creation and debugging of programs.



Module information
Module type: Positioning unit
Start I/O No.: 0000
Module model name: QD75MH4

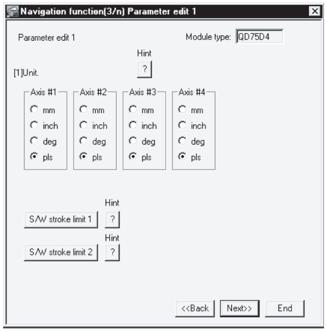
Setting item	Module side Buffer size	Module side Transfer word count		Transfer direction	PLC side Device
Feed present value (Axis #1)	2	2		->	D100
Machine feed value (Axis #1)	2	2		->	D102
Feed speed (Axis #1)	2	2		->	
Error No. (Axis #1)	1	1		->	
Warning No. (Axis #1)	1	1		->	
Enable M code (Axis #1)	1	1		->	
Busy (Axis #1)	1	1		->	
Feed present value (Axis #2)	2	2		->	
Machine feed value (Axis #2)	2	2		->	

(4) Ease of operation with navigation function (only for QD75P/QD75D)

GX Configurator-QP has a navigation function which can perform operations from data setting, write to the QD75P/QD75D, monitoring, test to data storage in a sequential order.

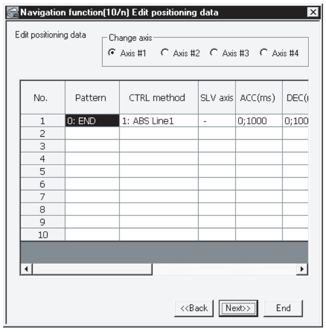
As basic settings and debugging can be performed in orderly sequence, you can understand operations necessary for this software and positioning control.

Parameter setting



Parameter edit 1
Module type: QD75D4
[1]Unit.
Axis #1: ○ mm ○ inch ○ deg ● pls
Axis #2: ○ mm ○ inch ○ deg ● pls
Axis #3: ○ mm ○ inch ○ deg ● pls
Axis #4: ○ mm ○ inch ○ deg ● pls

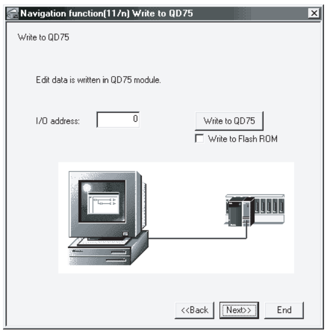
Positioning data setting



Edit positioning data
Change axis: ● Axis #1 ○ Axis #2 ○ Axis #3 ○ Axis #4

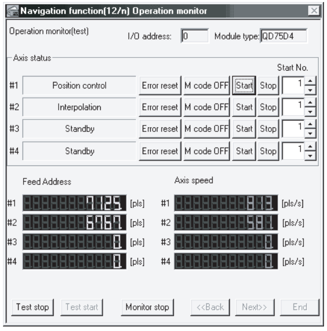
No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(
1	0: END	1: ABS Line1	-	0;1000	0;100
2					
3					
4					
5					
6					
7					
8					
9					
10					

Write to QD75P/QD75D



Write to QD75
Edit data is written in QD75 module.
I/O address: 0
☐ Write to Flash ROM

Debugging by test operation



Operation monitor(test)
I/O address: 0
Module type: QD75D4

Axis status

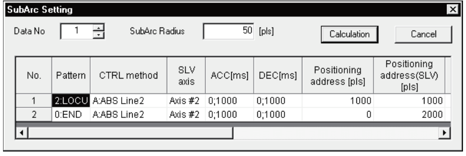
		Start No.
#1	Position control	1
#2	Interpolation	1
#3	Standby	1
#4	Standby	1

	Feed Address			Axis speed	
#1	7125	[pls]	#1	813	[pls/s]
#2	6767	[pls]	#2	581	[pls/s]
#3	0	[pls]	#3	0	[pls/s]
#4	0	[pls]	#4	0	[pls/s]

(5) Setting of optimum positioning data without complicated calculation

Positioning data can be set by sub arc setting and automatic axis speed setting.
Sub arc setting generates from the specified two linear interpolation control data the circular interpolation control data in which the angle between two linear paths is converted into a circular arc (curve) path.
Sub axis speed setting calculates the axis speed (command speed) from the operation time, travel, acceleration/deceleration time and motor specifications.

[Sub arc]

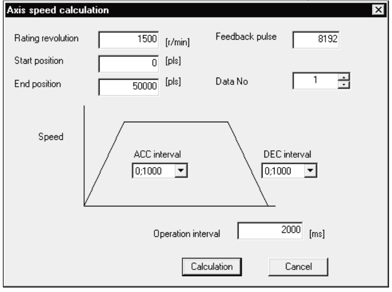


Data No 1

SubArc Radius 50 [pls]

No.	Pattern	CTRL method	SLV axis	ACC[ms]	DEC[ms]	Positioning address [pls]	Positioning address(SLV) [pls]
1	2:LOCU	A:ABS Line2	Axis #2	0;1000	0;1000	1000	1000
2	0:END	A:ABS Line2	Axis #2	0;1000	0;1000	0	2000

[Speed of axis setting]



Rating revolution 1500 [r/min]

Start position 0 [pls]

End position 50000 [pls]

Feedback pulse 8192

Data No 1

ACC interval 0;1000

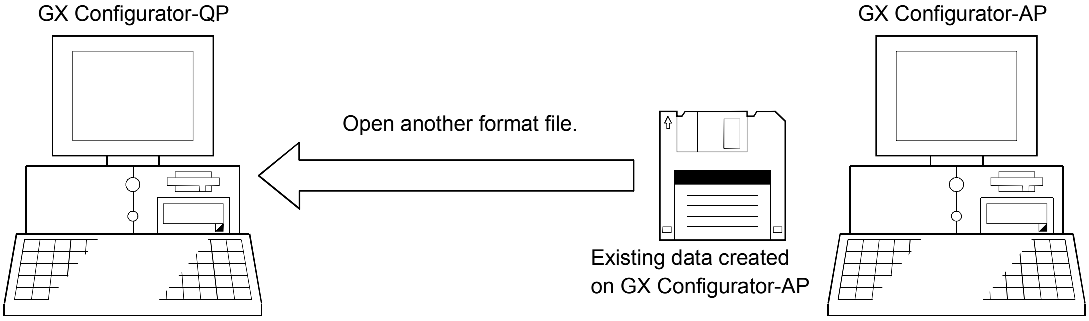
DEC interval 0;1000

Operation interval 2000 [ms]

These functions allow the optimum positioning data to be set without complicated calculation and advance measurement.

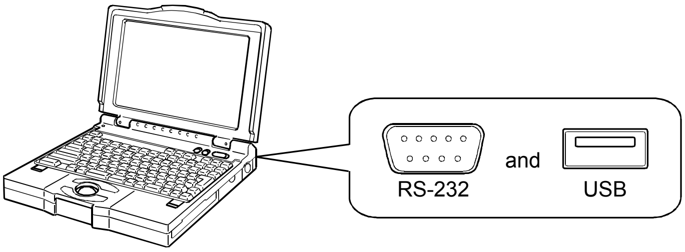
(6) Ease of transition from AD75 (only for QD75)

You can read and use the data created on A series SW1□-AD75P and GX Configurator-AP.
Valuable data is not wasted and can be utilized for QD75.



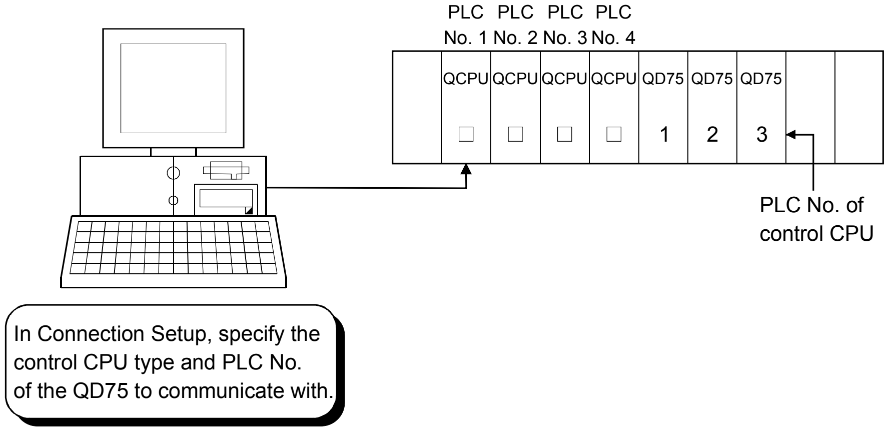
(7) Versatility by compatibility with RS-232 and USB

If the personal computer does not have a free serial port, connection can be made from the USB connector.
Especially for a notebook computer having a few serial ports, there are no restrictions due to shortage of ports.



(8) Compatible with multiple CPU system (only for QD75)

On GX Configurator-QP, setting the control CPU type and PLC No. of the QD75 to communicate with in Connection Setup (refer to Section 7.1) allows communication to be made with any QD75.



In Connection Setup, specify the control CPU type and PLC No. of the QD75 to communicate with.

(Example)
Connection Setup for communication with the QD75 under control of PLC No. 1
PLC type: Type of PLC No. 1, Multiple PLC specification: PLC No. 1

＊ : For details, refer to "QCPU User's Manual (Multiple CPU system)".

Point

- Communication with the QD75 cannot be made if the control CPU type and PLC No. of the QD75 to communicate with are not set correctly in Connection Setup.
- If correct settings have been made in Connection Setup, any of PLC No. 1 to No. 4 may be specified as the connection target of the connection cable.

1.2 Manual Makeup

This manual is made up of 11 chapters and appendices.
This manual assumes that GX Configurator-QP is used to perform steps from positioning control system checking to operation in the following procedure.

<Sequence of steps taken by the user up to positioning control system operation>

Step 1: Install and wire the positioning control system.	Refer To
• Install and wire the programmable controller (such as the QCPU/LCPU, QD75/LD75/LD77, I/O modules and intelligent function modules), servo amplifiers, motors, external switches and other external devices.	User's manual for the positioning module used

Step 2: Check the GX Configurator-QP functions and learn the basic operations.	Refer To
• Check the system with which GX Configurator-QP can be used.	Chapter 2
• Check the functions that can be performed by GX Configurator-QP.	Chapter 3
• Install GX Configurator-QP in the peripheral device and start the program.	Chapter 4
• Learn the GX Configurator-QP screen makeup and basic operations.	Chapter 5

Step 3: Start operation of GX Configurator-QP.	Refer To
• Create a project which will be the object of operation for GX Configurator-QP.	Chapter 6

Step 4: Check the connection and initial operation of the positioning control system.	Refer To
• Specify the QD75/LD75/LD77 to be accessed, ports where cables will be connected, and others.	Chapter 7
• Check the QD75/LD75/LD77 types and I/O addresses of the stations connected.	
• Check connection according to the signal states from the external devices.	
• Check the alarms and warnings of the positioning module.	
• Check that the servo motors are run by JOG operation.	

(To the next page)

(From the preceding page)

Step 5: Set and write data to the positioning module.	Refer To
• Set the parameters appropriate for the positioning control system and control.	Chapter 8
• Set the servo parameters appropriate for the specifications of the servo amplifiers and motors used. (Only QD75M, QD75MH, and LD77)	
• Set the positioning data and M code comments.	
• Check the positioning data on the simulation screen.	
• Make the corresponding setting if block start data and/or condition data is required.	
• Make error check to check the parameters, servo parameters, positioning data and block start data settings.	
• Write, read or verity the set data on the project.	Chapter 9

Step 6: Perform test operation and check and adjust the settings.	Refer To
• Make online error check to recheck the settings of the parameters, servo parameters, positioning data and block start data written to the QD75/LD75/LD77.	Chapter 10
• Check positioning control and test on the monitor screen.	
• Set the positioning data and block start data, and perform test operation.	
• Make present value change test, speed change test, OPR test, JOG operation test and MPG operation test to check the parameters, addresses, axis speeds, etc.	

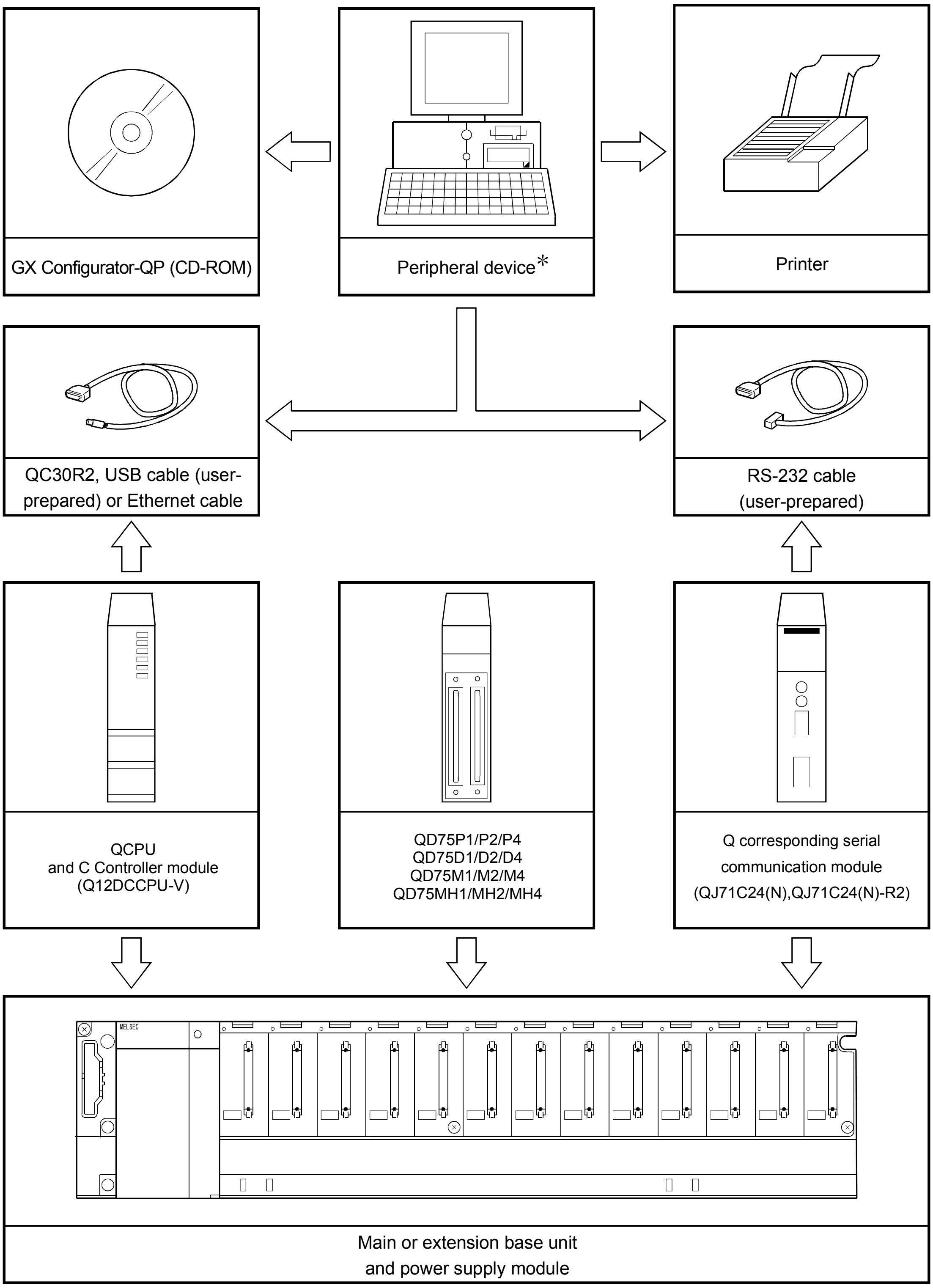
Step 7: Positioning control system operation	Refer To
• Operate the positioning control system with the programmable controller CPU program.	User's manual for the positioning module used

2. SYSTEM CONFIGURATION

2.1 System Configuration

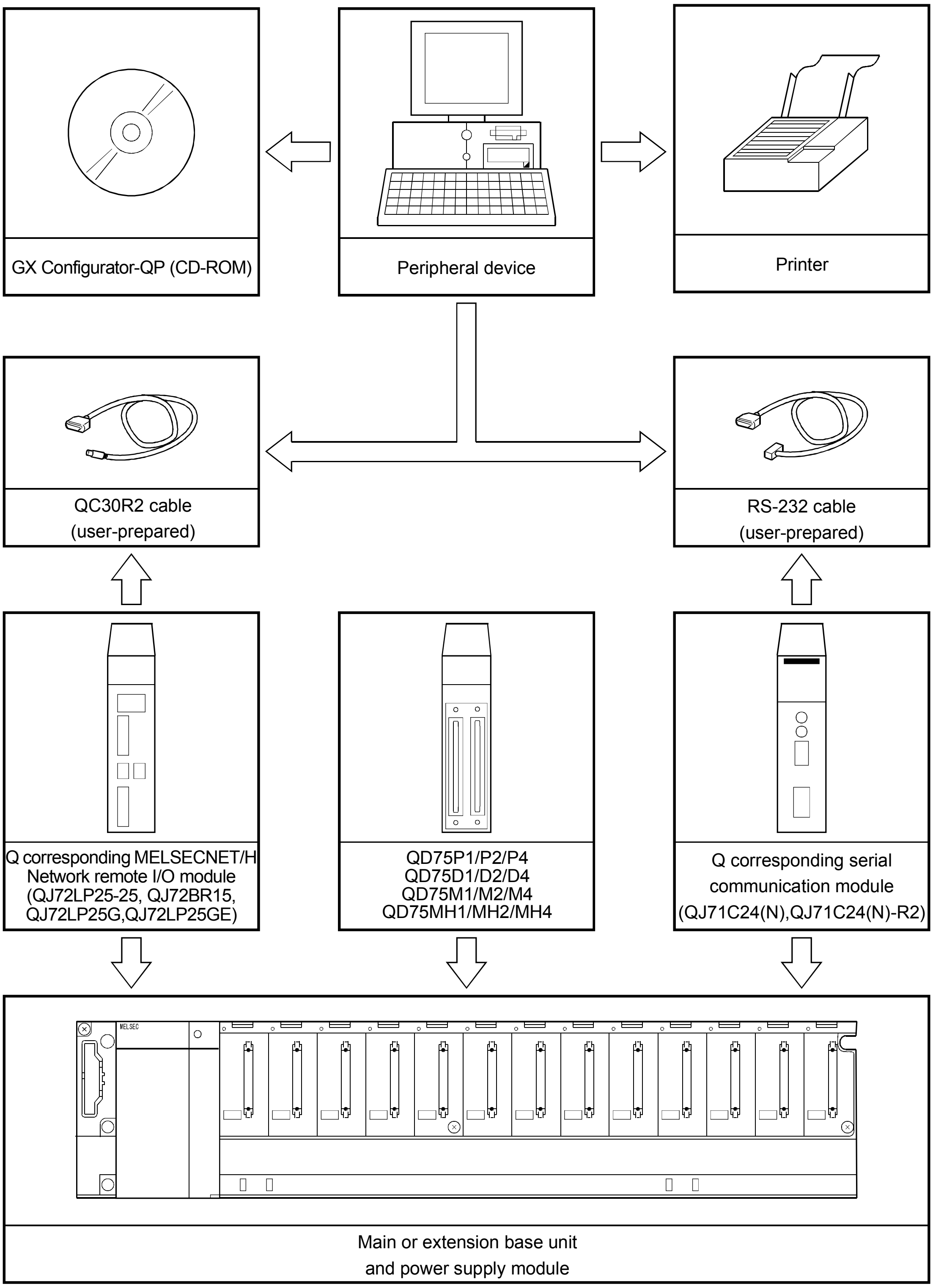
(1) Overall configuration of this system (MELSEC-Q series)

(a) Via QCPU, Q corresponding serial communication module, and C Controller module (Q12DCCPU-V)

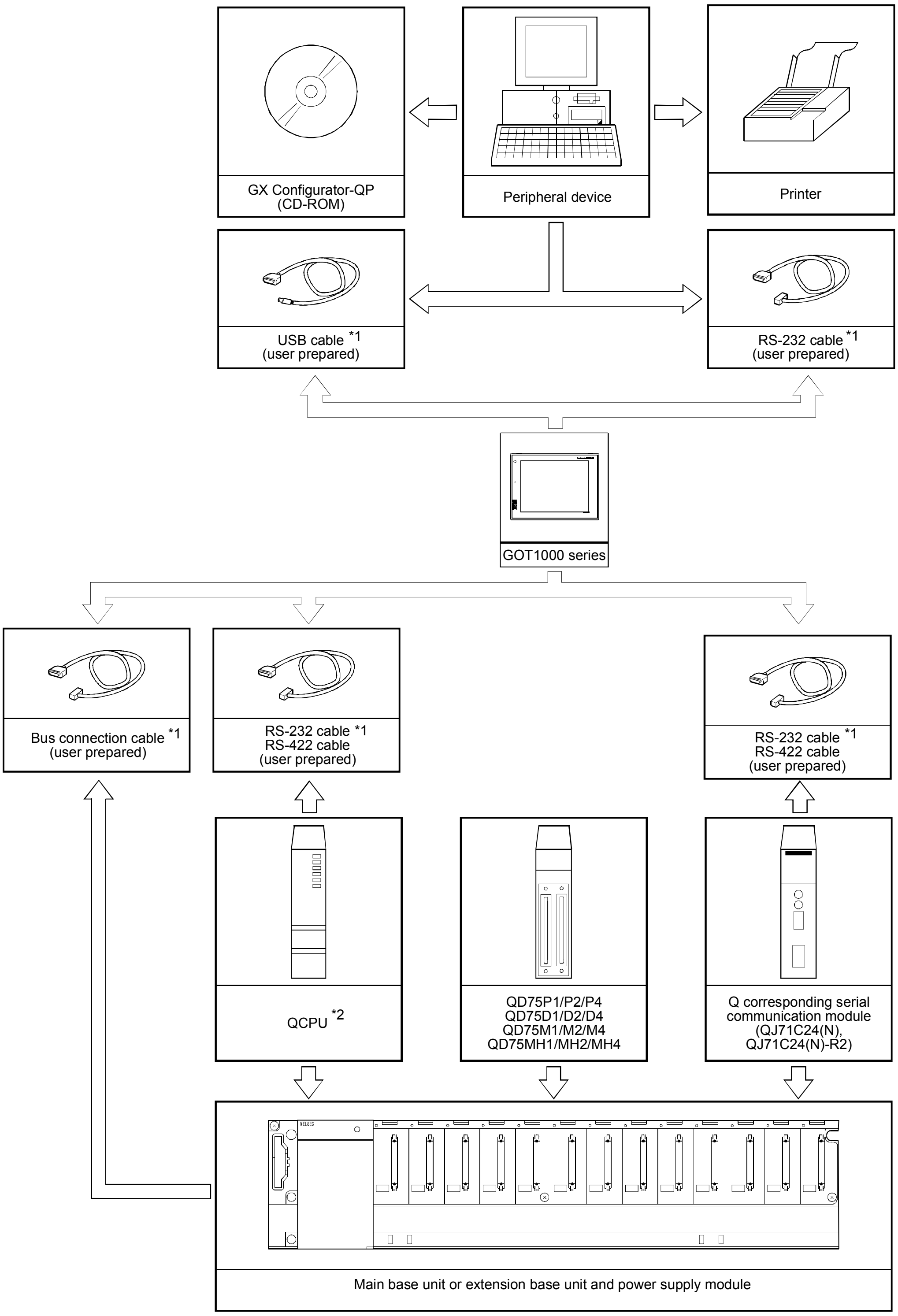

GX Configurator-QP (CD-ROM)
Peripheral device*
Printer
QC30R2, USB cable (user-prepared) or Ethernet cable
RS-232 cable (user-prepared)
QCPU and C Controller module (Q12DCCPU-V)
QD75P1/P2/P4
QD75D1/D2/D4
QD75M1/M2/M4
QD75MH1/MH2/MH4
Q corresponding serial communication module (QJ71C24(N),QJ71C24(N)-R2)
MELSEC
Main or extension base unit and power supply module

* : When the PC CPU module is used as a peripheral device, the connection cable is not needed since it is loaded to the base unit module directly. For details of the PC CPU module, refer to Manual for PC CPU module.

(b) Connecting to Q corresponding MELSECNET/H network remote I/O module directly



(c) Via GOT by the GOT transparent mode

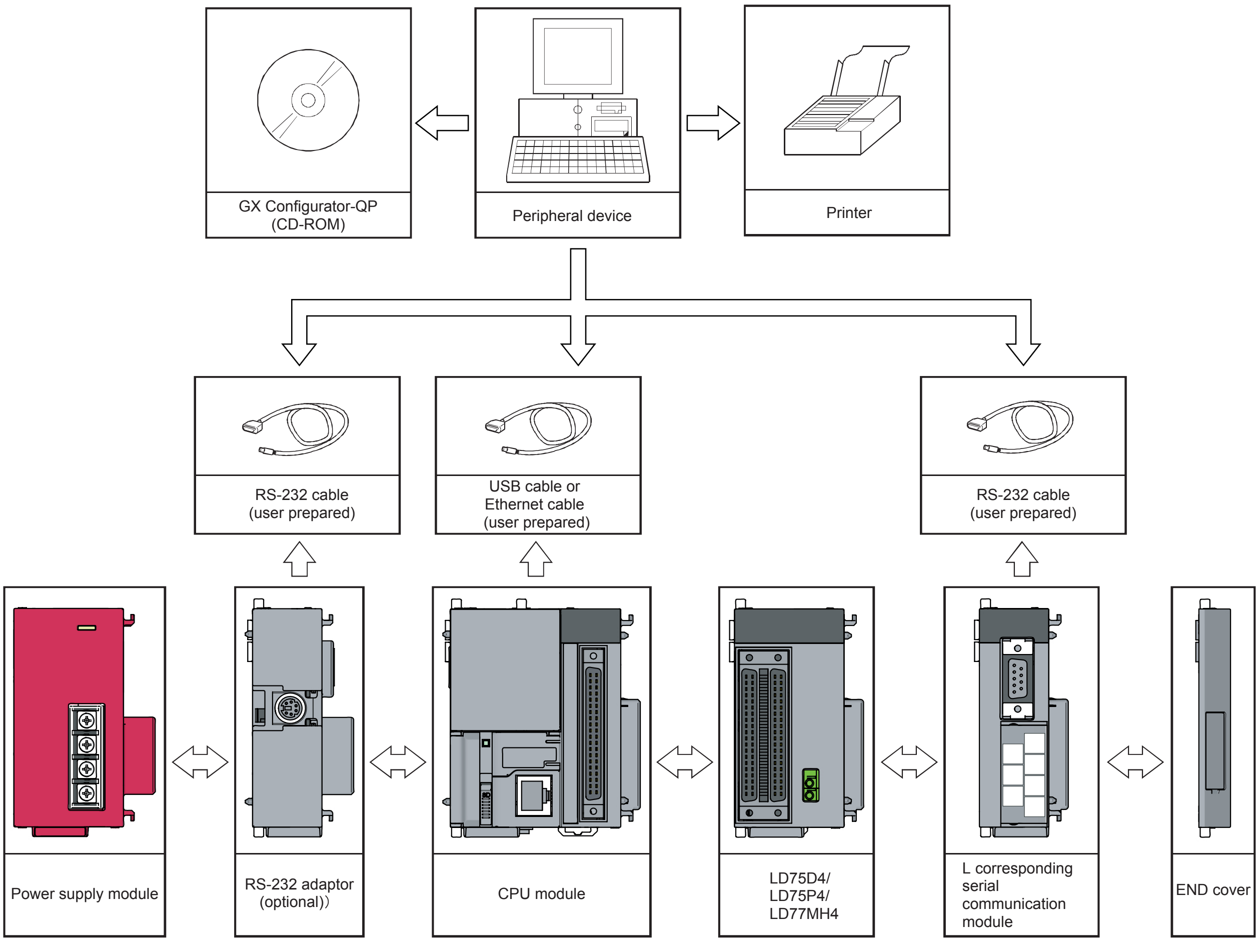


*1: For cables for connection of a peripheral device to the programmable controller via GOT by the GOT transparent mode, refer to the GOT1000 Series Connection Manual (Mitsubishi Products).

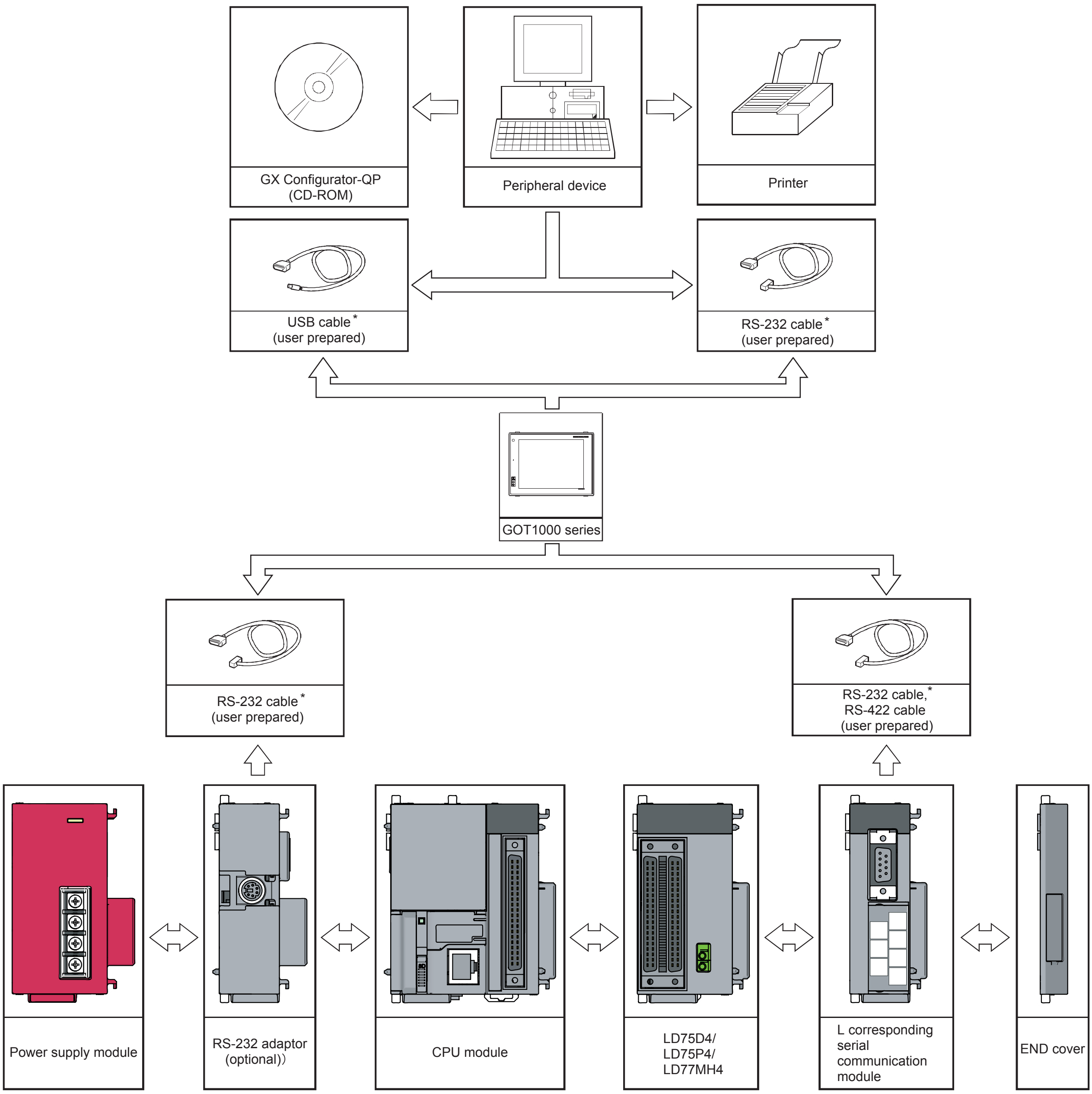
*2: The GOT transparent mode does not support Q corresponding MELSECNET/H Network remote I/O modules and C Controller module (Q12DCCPU-V).

(2) Overall configuration of this system (MELSEC-L series)

(a) Via LCPU, L corresponding serial communication module



(b) Via GOT by the GOT transparent mode



*: For cables for connection of a peripheral device to the programmable controller via GOT by the GOT transparent mode, refer to the GOT1000 Series Connection Manual (Mitsubishi Products).

Point

- Do not connect a peripheral device to the serial communication module by multidrop link.
- When the GOT transparent mode is activated, Ethernet connection cannot be made between GOT and a peripheral device and between GOT and the programmable controller.

(3) About the connection cables

(a) Connection to QCPU or Q corresponding MELSECNET/H network remote I/O module by QC30R2 (made by Mitsubishi Electric)

When the baudrate is set to 115.2/57.6kbps, communication cannot be made unless the peripheral device used is compatible with the communication speed of 115.2/57.6kbps.
If a communication error occurs, reduce the baudrate setting and restart communication.

(b) Connection to QCPU/LCPU or C Controller module (Q12DCCPU-V) by USB cable

- Usable when the USB driver has been installed with any of the following operating systems used.
  Microsoft® Windows® 98 Operating System
  Microsoft® Windows® Millennium Edition Operating System
  Microsoft® Windows® 2000 Professional Operating System
  Microsoft® Windows® XP Professional Operating System
  Microsoft® Windows® XP Home Edition Operating System
  Microsoft® Windows Vista® Home Basic Operating System
  Microsoft® Windows Vista® Home Premium Operating System
  Microsoft® Windows Vista® Business Operating System
  Microsoft® Windows Vista® Ultimate Operating System
  Microsoft® Windows Vista® Enterprise Operating System
  Microsoft® Windows® 7 Starter Operating System
  Microsoft® Windows® 7 Home Premium Operating System
  Microsoft® Windows® 7 Professional Operating System
  Microsoft® Windows® 7 Ultimate Operating System
  Microsoft® Windows® 7 Enterprise Operating System
- Use of the USB cable allows only programmable controller CPU to be connected.

(c) Connection to QCPU/LCPU by Ethernet cable

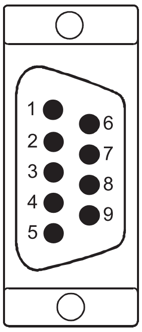
- Connect the personal computer with the Built-in Ethernet port QCPU or LCPU directly by using the Ethernet cable.
  The GX Configurator-QP does not support the online connection between the personal computer and the Built-in Ethernet port QCPU or LCPU.
- Use the following Ethernet cables.

Connection mode	Specifications
10BASE-T connection	Cables compliant with Ethernet standards, category 3 or higher (STP/UTP cables)
100BASE-TX connection	Cables compliant with Ethernet standards, category 5 or higher (STP/UTP cables)

In an environment subject to electric noise, use shielded twisted-pair (STP) cables.

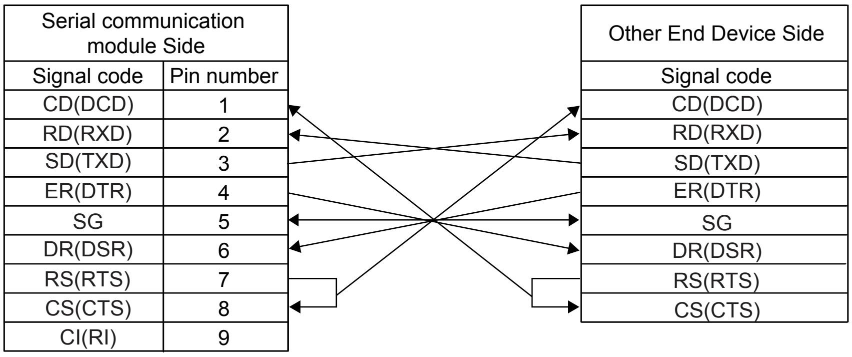
(d) Connection to serial communication module

The specifications of the RS-232 cable connector are indicated below.

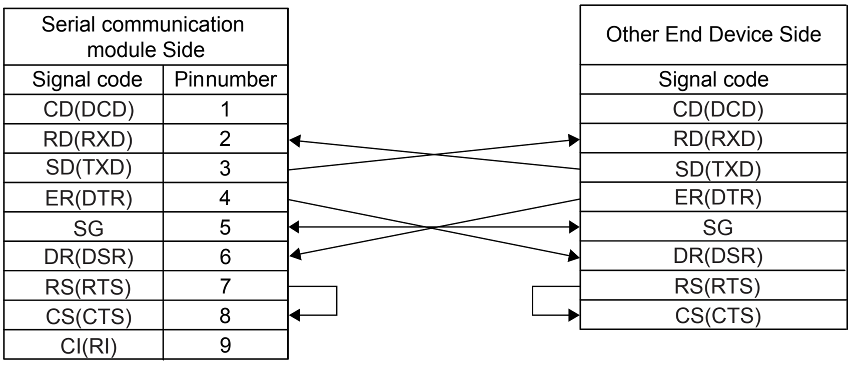


Pin Number	Signal Code	Signal Name	Signal Direction Serial communication module ↔ External device
1	CD(DCD)	Data carrier detect	←
2	RD(RXD)	Received data	←
3	SD(TXD)	Transmitted data	→
4	ER(DTR)	Data terminal ready	→
5	SG	Signal ground	↔
6	DR(DSR)	Data set ready	←
7	RS(RTS)	Request to send	→
8	CS(CTS)	Clear to send	←
9	CI(RI)	Ring indicator	←

- Connection example which can turn ON/OFF CD signal (No. 1 pin)



- Connection example which cannot turn ON/OFF CD signal (No. 1 pin)
  Connection example for exercising DC code control or DTR/DSR control



(e) Connection via GOT

For cables for connection of a peripheral device to the programmable controller via GOT by the GOT transparent mode, refer to the GOT1000 Series Connection Manual (Mitsubishi Products).

2.2 Operating Environment

The operating environment of GX Configurator-QP is indicated below.

Item		Description
Peripheral device	Personal computer	Personal computer on which Windows® operates.
	PC CPU module	MELSEC-Q series compatible PC CPU module (CONTEC CO., LTD. make)
Computer main unit		Refer to the following table "Used operating system and performance required for personal computer".
	CPU	
	Required memory	
Hard disk free space		200MB or more
Disk drive		CD-ROM disk drive
Display		800 × 600 dot or more resolution ＊1
Operating system ＊2		Microsoft® Windows® 95 Operating System SP 1 or later Microsoft® Windows® 98 Operating System Microsoft® Windows® Millennium Edition Operating System Microsoft® Windows NT® Workstation Operating System Version 4.0 SP 3 or later Microsoft® Windows® 2000 Professional Operating System Microsoft® Windows® XP Professional Operating System Microsoft® Windows® XP Home Edition Operating System Microsoft® Windows Vista® Home Basic Operating System Microsoft® Windows Vista® Home Premium Operating System Microsoft® Windows Vista® Business Operating System Microsoft® Windows Vista® Ultimate Operating System Microsoft® Windows Vista® Enterprise Operating System Microsoft® Windows® 7 Starter Operating System Microsoft® Windows® 7 Home Premium Operating System Microsoft® Windows® 7 Professional Operating System Microsoft® Windows® 7 Ultimate Operating System Microsoft® Windows® 7 Enterprise Operating System

＊1: For Windows Vista® and Windows® 7, resolution of 1024 × 768 pixels or more is recommended.

＊2: 64-bit Windows® XP and 64-bit Windows Vista® are not supported.

Used operating system and performance required for personal computer

Operating system	Performance Required for Personal Computer	
	CPU	Required memory
Windows® 95	Pentium® 133MHz or more	64MB or more
Windows® 98	Pentium® 133MHz or more	64MB or more
Windows® Me	Pentium® 150MHz or more	64MB or more
Windows NT® Workstation 4.0	Pentium® 133MHz or more	64MB or more
Windows® 2000 Professional	Pentium® 133MHz or more	64MB or more
Windows® XP	Pentium® 300MHz or more	128MB or more
Windows Vista®	Pentium® 1GHz or more	1GB or more
Windows® 7	Pentium® 1GHz or more	1GB or more (32-bit Windows® 7) 2GB or more (64-bit Windows® 7)

Point

- Windows® XP, Windows Vista®, and Windows® 7 do not support the following functions.
  If any of the following functions is attempted, this product may not operate normally.
    Start of application in Windows® compatible mode
    Fast user switching
    Remote desktop
    Large fonts (Details setting of Display properties)
    DPI setting other than 100%
- Windows® 7 does not support the following functions.
    Windows XP Mode
    Windows Touch
- Operate Windows Vista® and Windows® 7 with user privileges or higher.

2.3 Instructions for use of older version of GX Configurator-QP

If using an older version of GX Configurator-QP, pay attention to the following.

(1) For using QD75M

- When GX Configurator-QP Version 2.13P or later is used, setting items and setting values for the QD75M parameters have been added.
- If a QD75M project created with GX Configurator-QP Version 2.13P or later is opened on GX Configurator-QP Version 2.12N or earlier, some data will not be processed properly.
- For details, refer to "Section 8.2 Servo Parameter Setting".

(2) For using QD75MH

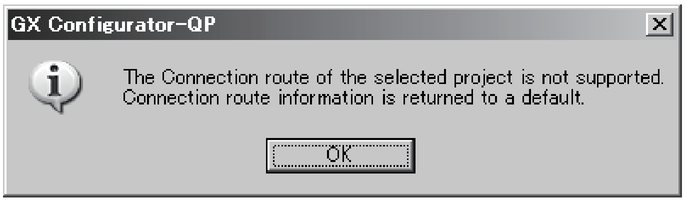
- Use GX Configurator-QP Version 2.20W or later.
- QD75MH projects cannot be opened on GX Configurator-QP Version 2.19V or earlier.

(3) For using LD75/LD77

- Use GX Configurator-QP Version 2.33K or later.
- LD75/LD77 projects cannot be opened on GX Configurator-QP Version 2.32J or earlier.

(4) When opening a project with unsupported connection destination data

If the following dialog box appears after an existing project is opened, the used Configurator-QP does not support the settings of the connection destination.



The Connection route of the selected project is not supported.
Connection route information is returned to a default.

Change the destination route.

3. FUNCTION LIST

3.1 Function List

(1) Function list

The main functions of GX Configurator-QP are listed.

Function			Description	QD75P/ QD75D	QD75M/ QD75MH	LD75	LD77
Edit	Parameter setting		Sets the basic parameters #1, basic parameters #2, extended parameters #1, extended parameters #2, OPR basic parameters and OPR extended parameters.	○	○	○	○
	Servo parameter setting		Sets the servo parameters. Sets servo basic parameters, servo regulation parameters and servo extended parameters for QD75M. Sets servo amplifier series, basic setting parameters, gain/filter parameters, extension setting parameters and I/O setting parameters, extended control parameters, special setting parameters for QD75MH/LD77.	×	○	×	○
	Positioning data setting		Sets the positioning data, such as pattern, control method, accel/decel time and address, on an axis basis.	○	○	○	○
		M code comment setting	Sets comments to the M codes assigned to the positioning data on an axis basis.	○	○	○	○
		Sub arc	Automatically generates positioning data to ensure smooth movement on the intersection of consecutive two-axis linear interpolations by circular interpolation.	○	○	○	○
		Automatic axis speed setting	Automatically calculates the axis speed in the constant-speed part by setting the time taken from a positioning start until the target position is reached.	○	×	○	×
	Block start data setting		Sets the starting mode, etc. of the positioning data specified for points on an axis basis.	○	○	○	○
		Condition data setting	Sets the data which is used as a special start condition in the block start data on an axis basis.	○	○	○	○
	Simulation		Simulates axis operation from the setting positioning data. Wave form data is displayed for single axis control. Locus data is displayed for two axis interpolation control.	○	○	○	○

Function			Description	QD75P/ QD75D	QD75M/ QD75MH	LD75	LD77
Monitor	Positioning monitor		Enters the monitor mode from the positioning data edit window and monitors the positioning data during operation.	○	○	○	○
	Block start monitor		Enters the monitor mode from the block start data edit window and monitors the block start data during operation.	○	○	○	○
	Operation monitor		Monitors the operating states, such as feed present values, axis feed speeds, axis statuses and executed positioning data numbers, of all axes.	○	○	○	○
		History monitor	Monitors the error, warning, start history of all axes.	○	○	○	○
		Signal monitor	Monitors the X/Y devices, external signals or status signals of all axes.	○	○	○	○
		Operation monitor	Monitors the control states, QD75/LD75/LD77 parameter settings or others of all axes.	○	○	○	○
		Servo monitor	Monitors the states of the servo amplifiers and servo motors on all axes.	×	○	×	○
	Sampling monitor	Signal	Monitors the specified signals while simultaneously sampling them.	○	○	○	○
		Buffer memory	Monitors the specified buffer memory data while simultaneously sampling them.	○	○	○	○
	System monitor		Shows the system configuration of the host and the I/O address and model (type) of the specified QD75.	○	○	×	×
Test	Cableless mode		Tests the QD75P/QD75D/LD75 alone without wiring between the servo amplifier and motor.	○	×	○	×
	Positioning data test edit		Writes the setting parameters, positioning data and block start data in the test mode.	○	○	○	○
	Operation test	Positioning start	Specifies the positioning data number and block start data point number and performs test operation.	○	○	○	○
		Present value change	Performs the change test of the feed present value.	○	○	○	○
		Speed change	Performs a speed change test on the axis on which a positioning start test is being done.	○	○	○	○
		OPR	Performs an original point return test.	○	○	○	○
		JOG operation	Performs a JOG operation test.	○	○	○	○
		Inching operation	Moves the axis over the specified distance per operation.	○	○	○	○
		MPG operation	Performs test operation using a manual pulse generator.	○	○	○	○

Function		Description	QD75P/ QD75D	QD75M/ QD75MH	LD75	LD77
Diagnosis	Checking connect	Displays signals from external devices. Also tests initial operation by JOG operation.	○	×	○	×
Trace	Wave trace	Traces the speed command for a given time and displays the waveform data relative to the time axis.	○	×	○	×
	Location trace	Traces the position command or real value for a given time and displays the track data of the axes.	○	×	○	×
Extended	Auto refresh setting	Assigns the QD75/LD75/LD77 buffer memory and CPU module devices for auto refresh between QD75/LD75/LD77 and CPU module.	○	○	○	○
	Navigation	Performs operations from parameter and positioning data settings to simple test operation and set data storage in accordance with navigation.	○	×	×	×

3.2 Menu List

The menu bar drop-down menus are listed below.

- Project
  - New Project ······ Section 6.1
  - Open Project ······ Section 6.2
  - Close Project ······ Section 6.4
  - Save Project ······ Section 6.3
  - Save as Project ······ Section 6.3
  - Delete Project ······ Section 6.5
  - Verify Project ······ Section 11.1.1
  - Import file
    - File reading of SW1RX/IVD/NX-AD75P ······ Section 6.6.1
    - File reading of SW0D5C-AD75P ······ Section 6.6.1
    - File reading of CSV form positioning data ······ Section 6.6.2
    - File reading of Trace data ······ Section 11.8.2,11.9.2
  - Export file
    - File writing of CSV form positioning data ······ Section 6.7
    - File writing of Trace data ······ Section 11.8.2,11.9.2
  - Change module type ······ Section 11.1.2
  - Print ······ Section 11.6.2
  - Printer setup ······ Section 11.6.1
  - Latest file ······ Section 6.2
  - Exit ······ Section 4.4

- Edit
  - Cut ······ Section 11.2.1
  - Copy ······ Section 11.2.1
  - Paste ······ Section 11.2.1
  - Select all ······ Section 11.2.1
  - Jump ······ Section 11.2.2
  - Clear row ······ Section 11.2.3
  - Clear column ······ Section 11.2.3
  - Axis copy ······ Section 11.3.1
  - Block start copy ······ Section 11.3.2
  - M code comment ······ Section 8.3.2
  - Condition data edit ······ Section 8.5.2
  - Simulation ······ Section 8.4
  - Assistance arc ······ Section 8.3.1
  - Speed of axis setting ······ Section 8.3.1

- View
  - Project tree view ······ Section 5.2
  - Toolbar ······ Section 5.2
  - Test toolbar ······ Section 5.2
  - Status bar ······ Section 5.2
  - Online toolbar ······ Section 5.2
  - Select block start data no ······ Section 8.5.1

- Online
  - Connection setup ······ Section 7.1
  - Read from module ······ Section 9.1
  - Write to module ······ Section 9.1
  - Writing of batch of multi module ······ Section 11.1.4
  - Verify module data ······ Section 9.1
  - Error check module data ······ Section 10.1
  - Servo amplifier data read ······ Section 10.1
  - OS information ······ Section 7.3
  - Flash ROM request ······ Section 9.3
  - Initialize module ······ Section 9.4
  - Monitor
    - Monitor On/Off ······ Section 10.2,10.3
  - Test
    - Test On/Off ······ Section 10.4
    - Edit positioning data ······ Section 11.7.2
    - Teaching ······ Section 11.7.1
    - Cableless mode ······ Section 10.4
    - Operation test
      - Operation test #1 ······ Section 10.4.1
      - Operation test #2 ······ Section 10.4.1
      - Operation test #3 ······ Section 10.4.1
      - Operation test #4 ······ Section 10.4.1
    - Error reset
      - Error reset #1 ······ Chapter 10
      - Error reset #2 ······ Chapter 10
      - Error reset #3 ······ Chapter 10
      - Error reset #4 ······ Chapter 10
    - M code off
      - M code off #1 ······ Chapter 10
      - M code off #2 ······ Chapter 10
      - M code off #3 ······ Chapter 10
      - M code off #4 ······ Chapter 10
    - All axis stop ······ Chapter 10
    - All axis Servo On/Off ······ Section 10.5
    - Tool ······ Section 10.5
      - #1 Servo Off command ······ Section 10.5
      - #2 Servo Off command ······ Section 10.5
      - #3 Servo Off command ······ Section 10.5
      - #4 Servo Off command ······ Section 10.5

- Tool
  - Error check ······ Section 8.6
  - Initializing data ······ Section 11.2.4
  - Navigation ······ Section 11.4
  - System monitor ······ Section 7.2
  - Intelligent function utility ······ Section 11.1.3
  - Option ······ Section 11.5

- Window
  - Cascade ······ Section 5.7
  - Tile vertically ······ Section 5.7
  - Arrange icons ······ Section 5.7
  - All close ······ Section 5.7

- Help
  - Error/Warning/List of Buffer memory ······ Section 11.10
  - Key operations list ······ Section 11.10
  - About ······ Section 11.10
  - Connection to MELFANS web ······ Section 11.10

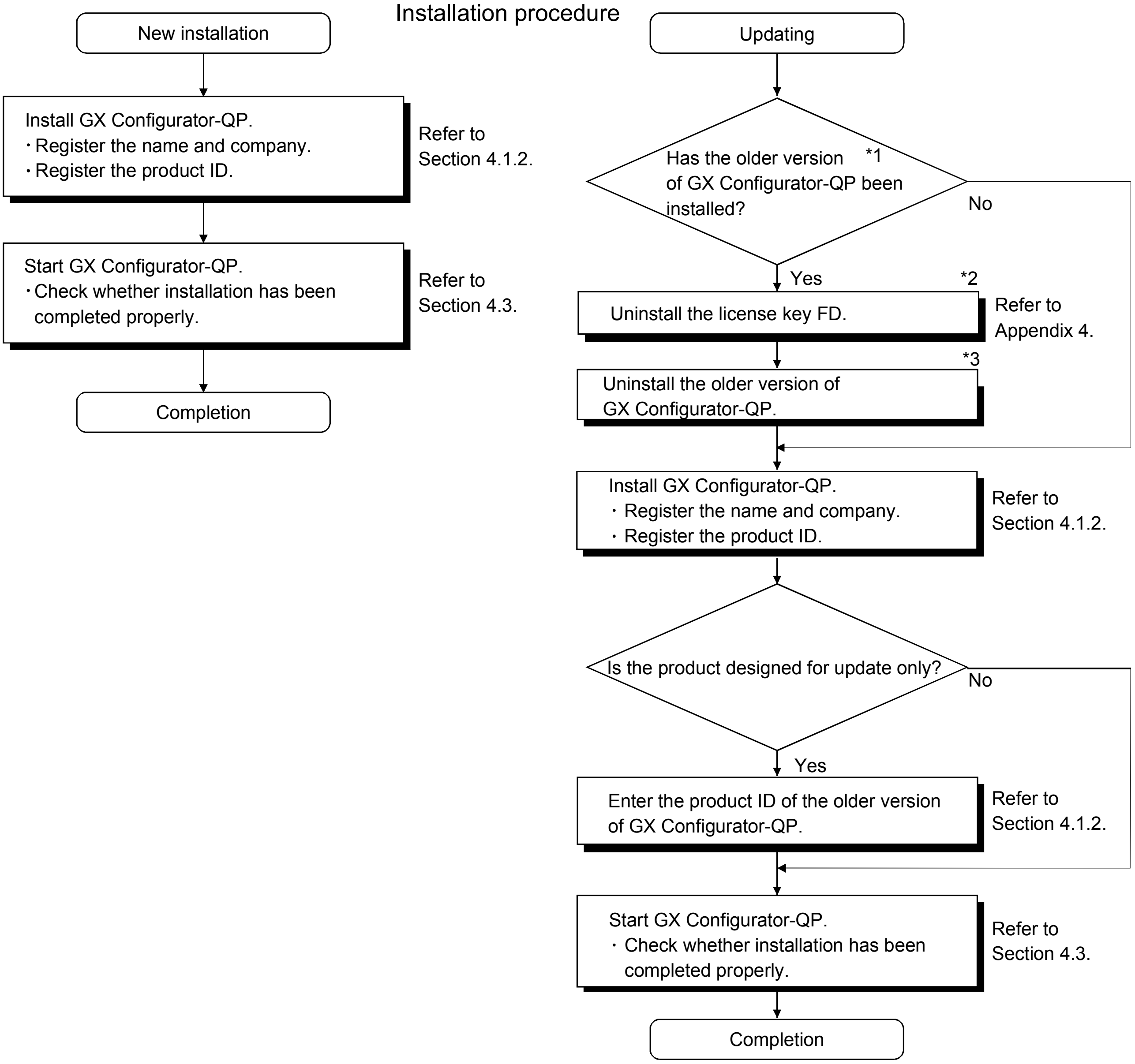
4. INSTALLATION AND UNINSTALLATION

This chapter describes how to install and uninstall GX Configurator-QP.

4.1 Installation

4.1.1 Installation procedure

Installation procedure


New installation
Install GX Configurator-QP.
・Register the name and company.
・Register the product ID.
Refer to Section 4.1.2.
Start GX Configurator-QP.
・Check whether installation has been completed properly.
Refer to Section 4.3.
Completion
Updating
Has the older version of GX Configurator-QP been installed? *1
No
Yes
*2
Uninstall the license key FD.
Refer to Appendix 4.
*3
Uninstall the older version of GX Configurator-QP.
Install GX Configurator-QP.
・Register the name and company.
・Register the product ID.
Refer to Section 4.1.2.
Is the product designed for update only?
No
Yes
Enter the product ID of the older version of GX Configurator-QP.
Refer to Section 4.1.2.
Start GX Configurator-QP.
・Check whether installation has been completed properly.
Refer to Section 4.3.
Completion

Point

＊1: The target is either of the following versions of software.
Refer to "Section 11.10 Help" for the way to confirm the version.
• SW0D5C-QD75P-E

＊2: This product can be installed if the license key FD is valid.(However, the license right decreases by 1.)

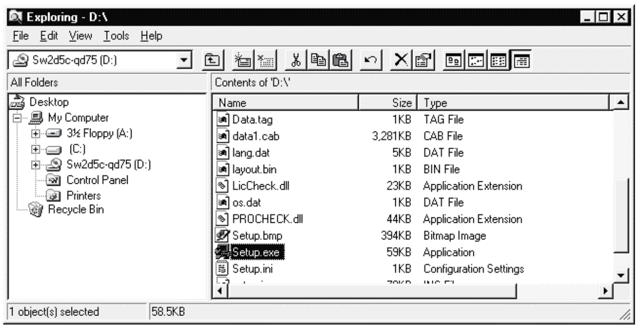
＊3: When performing uninstalling operation, refer to the operating manual of the installed product.

4.1.2 Installing GX Configurator-QP

The following explains how to install GX Configurator-QP.

Point

- Before starting installation, close all other applications running on Windows® .
- Install GX Configurator-QP compatible with the operating system.
  For compatible GX Configurator-QP versions, refer to Appendix 3.
- The installer may not work normally because the update program of operating system or other companies' software such as Windows Update and Java update may start automatically. Please install the driver after changing the setting of the update program not to start automatically.
- When the following operating system is being used, please logon as a user with the attribute of Administrator.
  Microsoft® Windows NT® Workstation Operating System Version 4.0
  Microsoft® Windows® 2000 Professional Operating System
  Microsoft® Windows® XP Professional Operating System
  Microsoft® Windows® XP Home Edition Operating System
  Microsoft® Windows Vista® Home Basic Operating System
  Microsoft® Windows Vista® Home Premium Operating System
  Microsoft® Windows Vista® Business Operating System
  Microsoft® Windows Vista® Ultimate Operating System
  Microsoft® Windows Vista® Enterprise Operating System
  Microsoft® Windows® 7 Starter Operating System
  Microsoft® Windows® 7 Home Premium Operating System
  Microsoft® Windows® 7 Professional Operating System
  Microsoft® Windows® 7 Ultimate Operating System
  Microsoft® Windows® 7 Enterprise Operating System



Contents of 'D:\'

Name	Size	Type
Data.tag	1KB	TAG File
data1.cab	3,281KB	CAB File
lang.dat	5KB	DAT File
layout.bin	1KB	BIN File
LicCheck.dll	23KB	Application Extension
os.dat	1KB	DAT File
PROCHECK.dll	44KB	Application Extension
Setup.bmp	394KB	Bitmap Image
Setup.exe	59KB	Application
Setup.ini	1KB	Configuration Settings

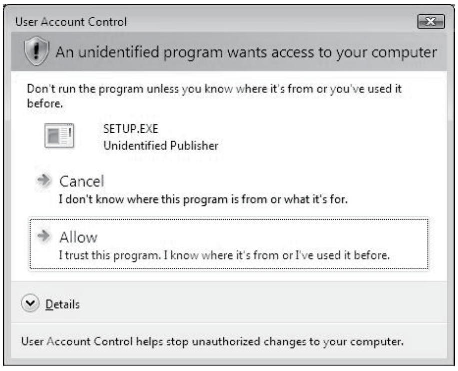
1 object(s) selected 58.5KB

1) After powering on the personal computer, start Windows® .

2) Start Windows® Explorer and click the drive where the disk is inserted. Double-click "Setup.exe".

   To display Windows® Explorer, choose [Start] → [Programs] → [Windows Explorer].

   ∗ : When user account control is enabled, the following dialog box appears.
   Click "Allow" or Yes button.
   [Windows Vista®]



An unidentified program wants access to your computer

Don't run the program unless you know where it's from or you've used it before.

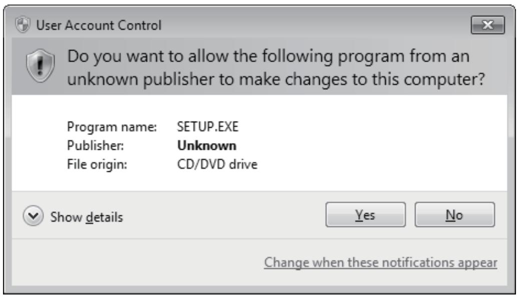
SETUP.EXE
Unidentified Publisher

I don't know where this program is from or what it's for.

I trust this program. I know where it's from or I've used it before.

User Account Control helps stop unauthorized changes to your computer.

[Windows® 7]



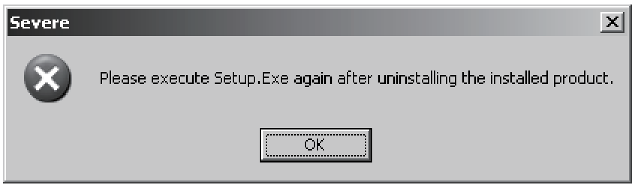
Do you want to allow the following program from an unknown publisher to make changes to this computer?

Program name: SETUP.EXE
Publisher: **Unknown**
File origin: CD/DVD drive

↓
(To the next page)

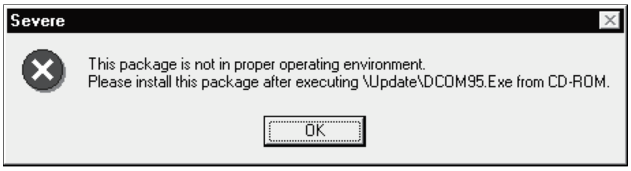
(From the preceding page)

↓

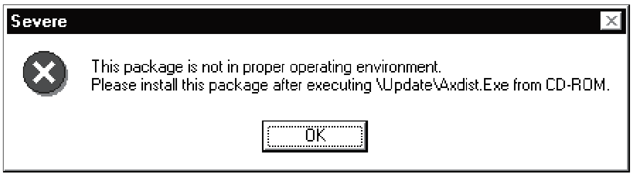


Please execute Setup.Exe again after uninstalling the installed product.

3) If the message shown on the left appears, click the OK button, uninstall GX Configurator-QP, and then reinstall it.

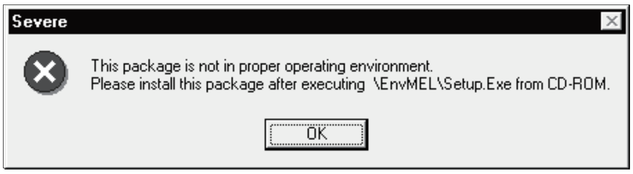


This package is not in proper operating environment.
Please install this package after executing \Update\DCOM95.Exe from CD-ROM.



This package is not in proper operating environment.
Please install this package after executing \Update\Axdist.Exe from CD-ROM.

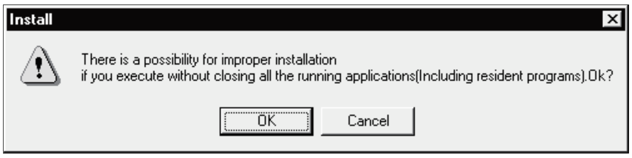
4) If either of the left screens appears, perform operation in accordance with the instructions given in (a) in "(reference) When message appears at start of installation".
After the operation is over, restart installation operation.



This package is not in proper operating environment.
Please install this package after executing \EnvMEL\Setup.Exe from CD-ROM.

If the left screen appears, perform operation in accordance with the instructions given in (b) in "(reference) When message appears at start of installation".
After the operation is over, restart installation operation.

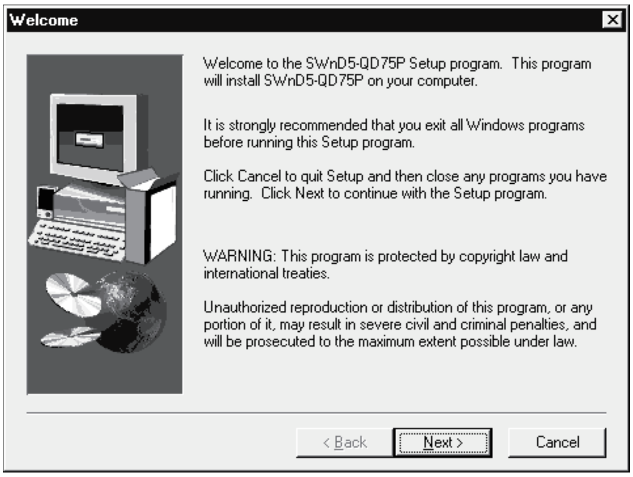
↓



There is a possibility for improper installation
if you execute without closing all the running applications(Including resident programs).Ok?

5) The screen shown on the left appears. Make sure that all applications have been closed, and click the OK button.
If applications are running, close them all.

↓



Welcome to the SWnD5-QD75P Setup program. This program will install SWnD5-QD75P on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

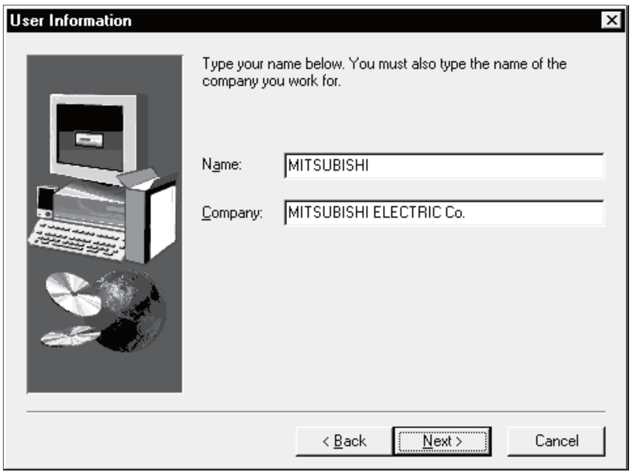
6) As the screen shown on the left appears, click the Next> button.

↓

(To the next page)

(From the preceding page)

↓



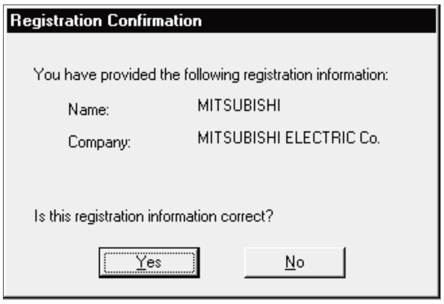
Type your name below. You must also type the name of the company you work for.

Name: MITSUBISHI

Company: MITSUBISHI ELECTRIC Co.

7) Enter the name and company, and click the Next> button.

↓



You have provided the following registration information:

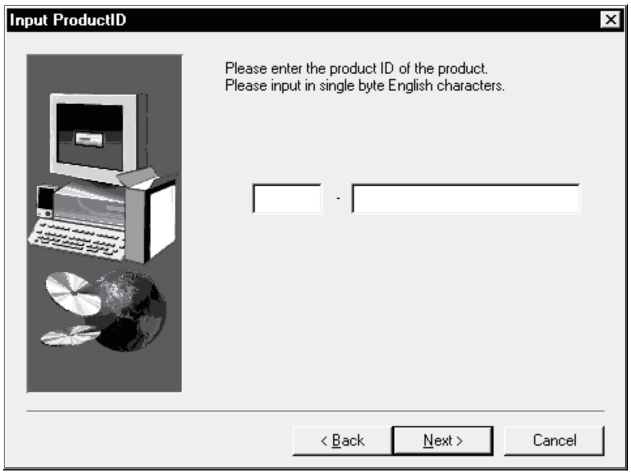
Name: MITSUBISHI

Company: MITSUBISHI ELECTRIC Co.

Is this registration information correct?

8) Check the registered name and company.
If they are correct, click the Yes button.
To change them, click the No button to return to the previous screen.

↓



Please enter the product ID of the product.
Please input in single byte English characters.

9) Enter the product ID and chick the Next> button.
The product ID is given in the "License agreement" packed with the product.

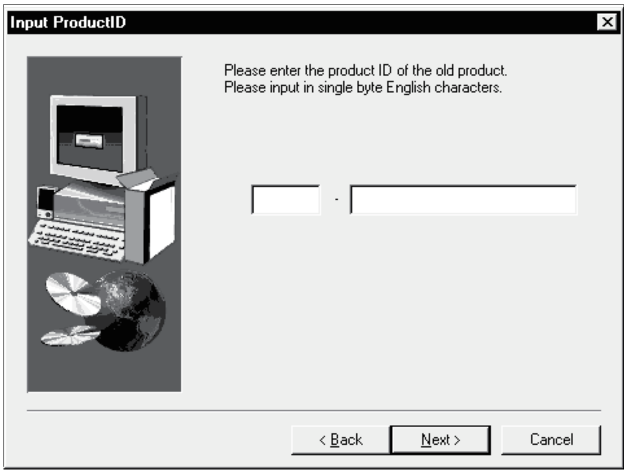
Proceed to Step 11) to install the product newly.
Proceed to Step 10) to update the product.

↓

(To the next page)

(From the preceding page)

↓



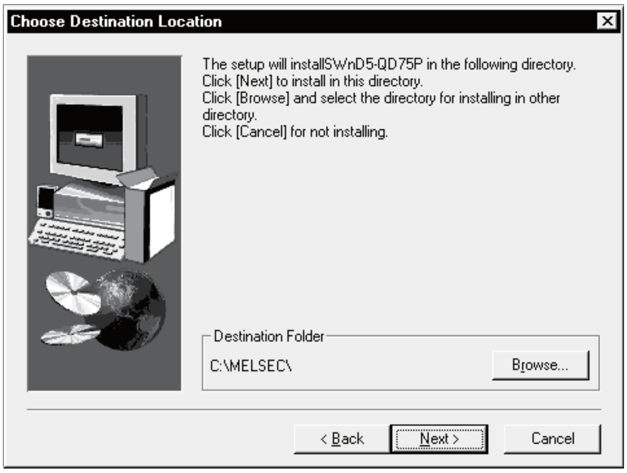
Input ProductID

Please enter the product ID of the old product.
Please input in single byte English characters.

10) When an update-only product is used for updating, the screen shown on the left appears. Enter the product ID of the old product and click the Next> button.
The product ID is given in the "Software Registration Card" or "License agreement" packed with the product.

The screen shown on the left does not appear when the product is installed anew.

↓



Choose Destination Location

The setup will installSWnD5-QD75P in the following directory.
Click [Next] to install in this directory.
Click [Browse] and select the directory for installing in other directory.
Click [Cancel] for not installing.

Destination Folder
C:\MELSEC\

11) Specify the installation destination folder.
After specifying the destination folder, click the Next> button.
It defaults to "C:\MELSEC\".
To change the destination folder, click the Browse button and specify a new drive and folder.

REMARK

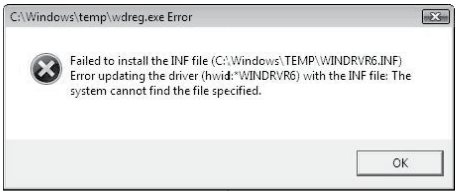
If the following dialog box appears, click the OK button to end the installation.
Then, reinstall GX Configurator-QP compatible with the operating system.
For the versions of GX Configurator-QP compatible with each operating system, refer to Appendix 3.
(The following screen may appear behind another screen. Then, press the Alt + Tab keys to bring it to the front.)

↓

(To the next page)

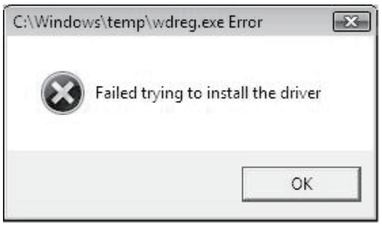
(From the preceding page)

↓



C:\Windows\temp\wdreg.exe Error

Failed to install the INF file (C:\Windows\TEMP\WINDRVR6.INF)
Error updating the driver (hwid:*WINDRVR6) with the INF file: The system cannot find the file specified.



C:\Windows\temp\wdreg.exe Error

Failed trying to install the driver

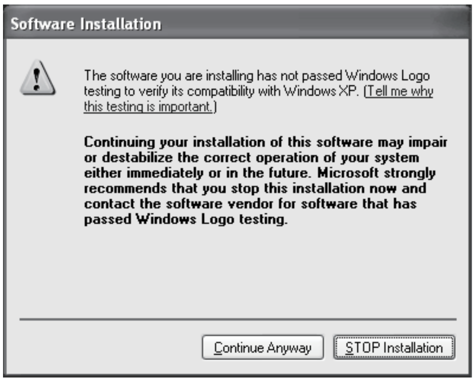
[Windows® XP]

The following screen may appear at installation.

Click Continue.

We checked operations in Windows® XP (Problems never occur after installation.)

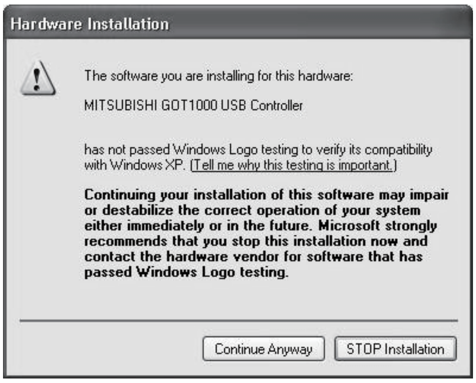
The following screen may appear behind another screen. Then, press the Alt + Tab keys to bring it to the front.



Software Installation

The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.



Hardware Installation

The software you are installing for this hardware:

MITSUBISHI GOT1000 USB Controller

has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

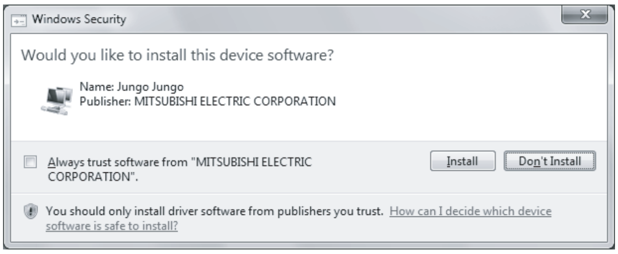
↓

(To the next page)

(From the preceding page)
↓

[Windows Vista® and Windows® 7]

The following screen may appear at installation.
Click Install. (Although the displayed screen may differ for some operating systems, the operation is the same.)
The following screen may appear behind another screen. Then, press the Alt + Tab keys to bring it to the front.

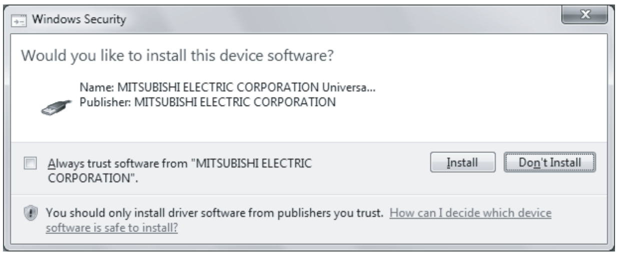


Would you like to install this device software?

Name: Jungo Jungo
Publisher: MITSUBISHI ELECTRIC CORPORATION

☐ Always trust software from "MITSUBISHI ELECTRIC CORPORATION".

You should only install driver software from publishers you trust. How can I decide which device software is safe to install?



Would you like to install this device software?

Name: MITSUBISHI ELECTRIC CORPORATION Universa...
Publisher: MITSUBISHI ELECTRIC CORPORATION

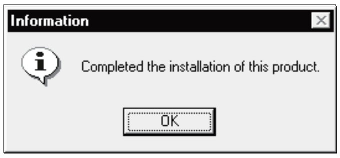
☐ Always trust software from "MITSUBISHI ELECTRIC CORPORATION".

You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

↓
(To the next page)

(From the preceding page)

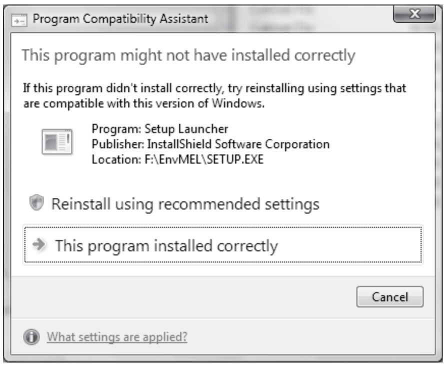
↓



Information

Completed the installation of this product.

12) When the screen on the left appears, installation is complete.
Click the OK button.
∗: When the following screen appears, select "This program installed correctly".



Program Compatibility Assistant

This program might not have installed correctly

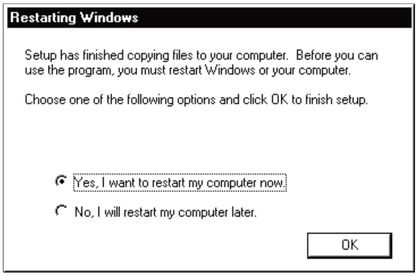
If this program didn't install correctly, try reinstalling using settings that are compatible with this version of Windows.

Program: Setup Launcher
Publisher: InstallShield Software Corporation
Location: F:\EnvMEL\SETUP.EXE

Reinstall using recommended settings
This program installed correctly
Cancel
What settings are applied?

Do not choose "Reinstall using recommended settings", because the installer installs an incorrect module.
If choose, reinstall GX Configurator-QP with following POINT on the next page.

↓



Restarting Windows

Setup has finished copying files to your computer. Before you can use the program, you must restart Windows or your computer.

Choose one of the following options and click OK to finish setup.

● Yes, I want to restart my computer now.

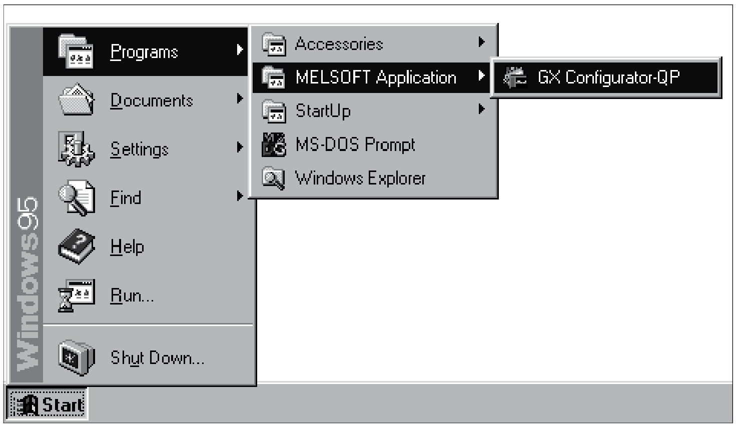
○ No, I will restart my computer later.

13) If the message shown on the left appears, restart Windows® .

↓

(Complete)

Installing GX Configurator-QP registers the icon as shown below.



REMARK

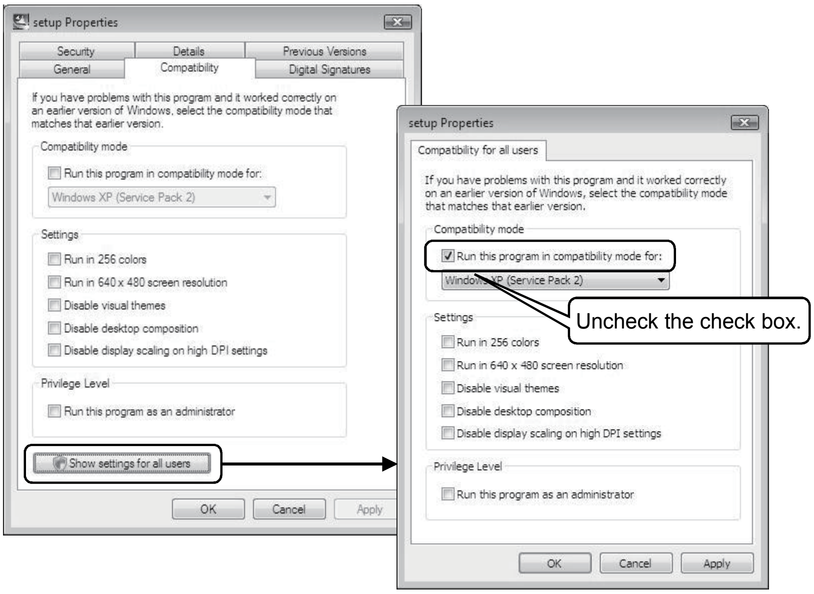
For Windows® XP, Windows Vista®, and Windows® 7, the icon is registered under [MELSOFT Application], displayed by selecting [All Programs] from the start menu.

Point

Note the following when starting the installer from the hard disk on the personal computer.

If the "Program Compatibility Assistant" screen appears after the installation, choose "This program installed correctly".
If "Reinstall using recommended settings" is selected by mistake, 'Windows XP compatibility mode' is set automatically.
Disable the 'Windows XP compatibility mode' by following the procedure described below, and perform the reinstallation.

1. Right-click on the setup.exe icon of the installation target in the Windows explorer, and open the "setup Properties" screen.
2. Select the "Compatibility" tab and click the Show settings for all users button.
3. Uncheck the "Run this program in compatibility mode for:" check box of compatibility mode in the "Compatibility for all users" tab and click the OK button.
4. Click the OK button on the "setup Properties" screen.



setup Properties

If you have problems with this program and it worked correctly on an earlier version of Windows, select the compatibility mode that matches that earlier version.

Compatibility mode
☐ Run this program in compatibility mode for:
Windows XP (Service Pack 2)

Settings
☐ Run in 256 colors
☐ Run in 640 x 480 screen resolution
☐ Disable visual themes
☐ Disable desktop composition
☐ Disable display scaling on high DPI settings

Privilege Level
☐ Run this program as an administrator

setup Properties (Compatibility for all users)

If you have problems with this program and it worked correctly on an earlier version of Windows, select the compatibility mode that matches that earlier version.

Compatibility mode
☑ Run this program in compatibility mode for:
Windows XP (Service Pack 2)

Settings
☐ Run in 256 colors
☐ Run in 640 x 480 screen resolution
☐ Disable visual themes
☐ Disable desktop composition
☐ Disable display scaling on high DPI settings

Privilege Level
☐ Run this program as an administrator

Uncheck the check box.

(Reference) When message appears at start of installation

When the installation of this product starts, the "This package is not in proper operating environment" message appears, disabling normal completion of installation.
In such a case, close all applications and perform the (a) or (b) operation.

(a) Installation of dcom95.exe or Axdist.exe

Execute dcom95.exe or Axdist.exe provided for GX Configurator-QP.
Install GX Configurator-QP after executing the exe file and restarting the IBM-PC/AT compatible.
The exe file to be executed on the corresponding operating system is indicated below.

Operating System	File name
Microsoft® Windows® 95 Operating System Microsoft® Windows® 98 Operating System	dcom95.exe Axdist.exe
Microsoft® Windows NT® Workstation Operating System Version 4.0	Axdist.exe

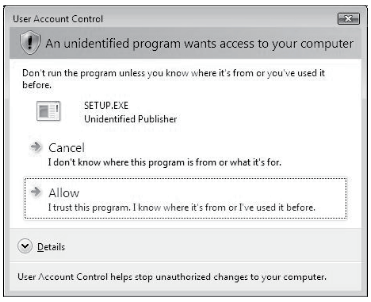
(dcom95.exe and Axdist.exe are in the "Update" folder on CD-ROM.)

(b) Installation of EnvMEL

Execute Setup.exe in the "EnvMEL" folder on this product CD-ROM.
Install GX Configurator-QP after executing the "Setup.exe".

＊: When user account control is enabled, the following dialog box appears.
Click Allow or Yes.

[Windows Vista®]



An unidentified program wants access to your computer

Don't run the program unless you know where it's from or you've used it before.

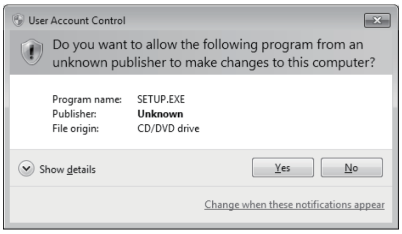
SETUP.EXE
Unidentified Publisher

Cancel
I don't know where this program is from or what it's for.

Allow
I trust this program. I know where it's from or I've used it before.

User Account Control helps stop unauthorized changes to your computer.

[Windows® 7]

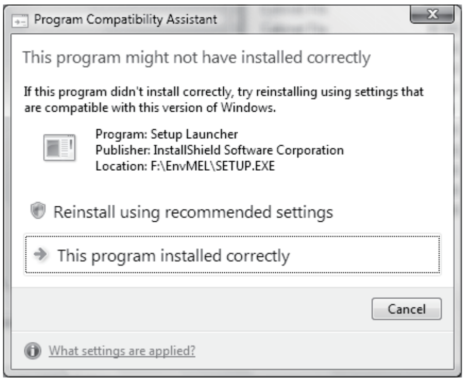


Do you want to allow the following program from an unknown publisher to make changes to this computer?

Program name: SETUP.EXE
Publisher: **Unknown**
File origin: CD/DVD drive

After executing the above exe file, install the product again. If this product is not installed properly at this time, reboot the personal computer.

＊: If the following dialog box appears, select "This program installed correctly". Do not choose "Reinstall using recommended settings", because the installer installs an incorrect module.


Program Compatibility Assistant
Reinstall using recommended settings
This program installed correctly
Cancel
What settings are applied?

This program might not have installed correctly

If this program didn't install correctly, try reinstalling using settings that are compatible with this version of Windows.

Program: Setup Launcher
Publisher: InstallShield Software Corporation
Location: F:\EnvMEL\SETUP.EXE

4.1.3 Installing the USB Driver

To communicate between the personal computer on which Windows® 2000 Professional, Windows® XP, Windows Vista®, or Windows® 7 has been installed and the CPU module with USB, install a USB driver.
The following is the USB driver installation procedure.

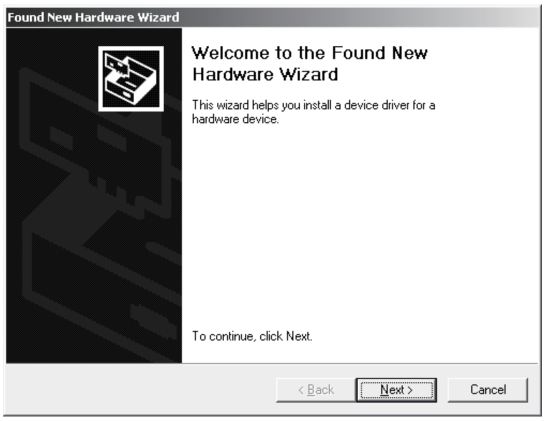
Point

If the USB driver cannot be installed, check the following setting.

- When Windows® 2000 Professional is used
  If you have selected "Block-Prevent installation of unsigned files" after [Control Panel] - [System] - [Hardware] - [Driver Signing], the USB driver may not be installed.
  Choose "Ignore-Install all files, regardless of file signature" or "Warn-Display a message before installing an unsigned file" for [Driver Signing], and install the USB driver.
- When Windows XP used
  If you have selected "Block-Never install unsigned driver software" after [Control Panel] - [System] - [Hardware] - [Driver Signing], the USB driver may not be installed.
  Choose "Ignore-Install the software anyway and don't ask for my approval" or "Warn-Prompt me each time to choose an action" for [Driver Signing], and install the USB driver.

[1] When Windows® 2000 Professional is used

The following indicates the procedure for installing the USB driver when using Windows® 2000 Professional.



Found New Hardware Wizard

Welcome to the Found New Hardware Wizard

This wizard helps you install a device driver for a hardware device.

To continue, click Next.

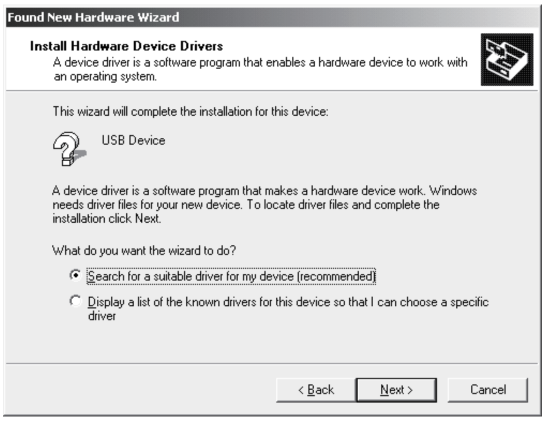
1) The screen shown on the left appears when the personal computer and the CPU module is connected with USB cable.
   Click the Next>.

↓

(To the next page)

(From the previous page)

↓


Found New Hardware Wizard

Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.

This wizard will complete the installation for this device:

USB Device

A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.

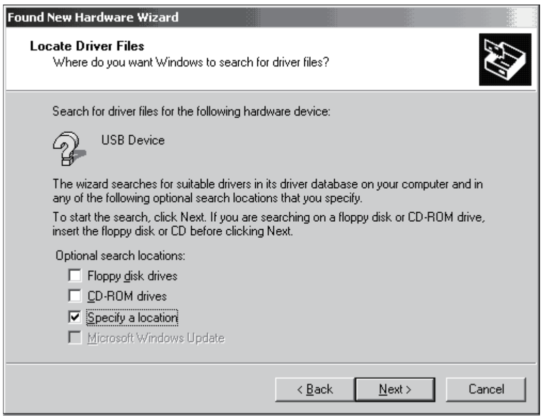
What do you want the wizard to do?

● Search for a suitable driver for my device (recommended)

○ Display a list of the known drivers for this device so that I can choose a specific driver

2) Choose " Search for a suitable driver for my device (recommended)" and click the Next>.

↓


Found New Hardware Wizard

Locate Driver Files
Where do you want Windows to search for driver files?

Search for driver files for the following hardware device:

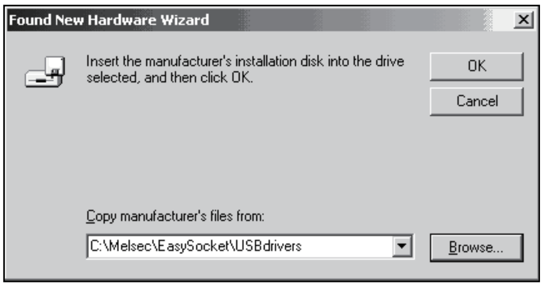
USB Device

The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.

Optional search locations:
☐ Floppy disk drives
☐ CD-ROM drives
☑ Specify a location
☐ Microsoft Windows Update

3) Check "Specify a location" and click the Next>.

↓

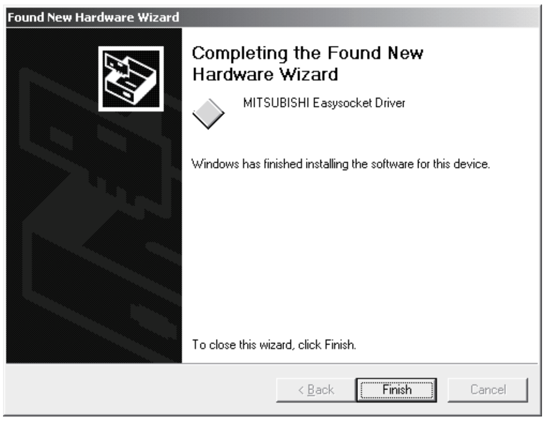

Found New Hardware Wizard

Insert the manufacturer's installation disk into the drive selected, and then click OK.

Copy manufacturer's files from:
C:\Melsec\EasySocket\USBdrivers

4) As the screen on the left appears, set the GX Configurator-QP installation destination "Easysocket\USBdrivers" and click the Next>.
The screen shown on the left shows the example of setting C:\MELSEC\Easysocket\USBdrivers.
If volume MELSOFT products have been installed, browse the installation destination of the first product.

↓


Found New Hardware Wizard

Completing the Found New Hardware Wizard

MITSUBISHI Easysocket Driver

Windows has finished installing the software for this device.

To close this wizard, click Finish.

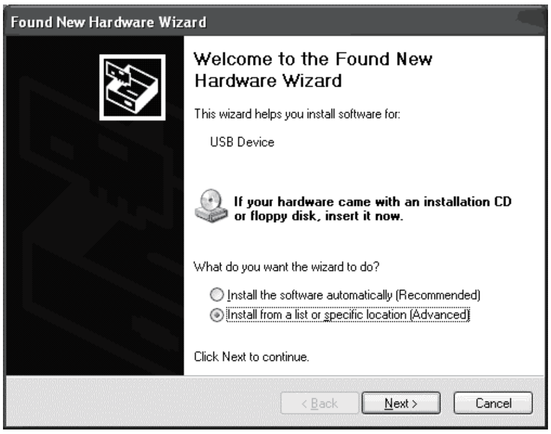
5) The screen on the left appears to indicate completion of installation.
Click the Finish to terminate installation.

↓

(Completion)

[2] When Windows® XP is used

The following indicates the procedure for installing the USB driver when using Windows® XP.



Welcome to the Found New Hardware Wizard

This wizard helps you install software for:

USB Device

If your hardware came with an installation CD or floppy disk, insert it now.

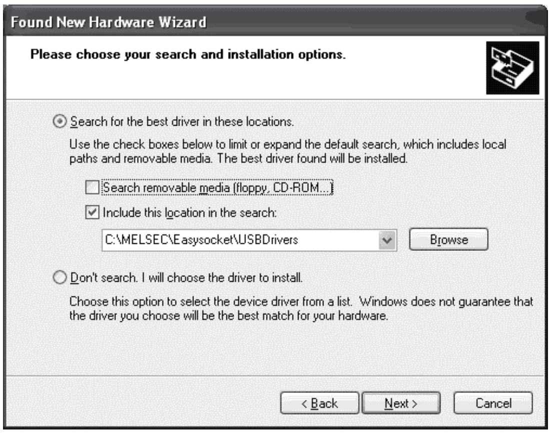
What do you want the wizard to do?

○ Install the software automatically (Recommended)
● Install from a list or specific location (Advanced)

Click Next to continue.

1) The screen shown on the left appears when the personal computer and the CPU module is connected with USB cable.
Choose "Install from a list or specific location [Advanced]" and click the Next>.

↓



Please choose your search and installation options.

● Search for the best driver in these locations.

Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.

☐ Search removable media (floppy, CD-ROM...)
☑ Include this location in the search:

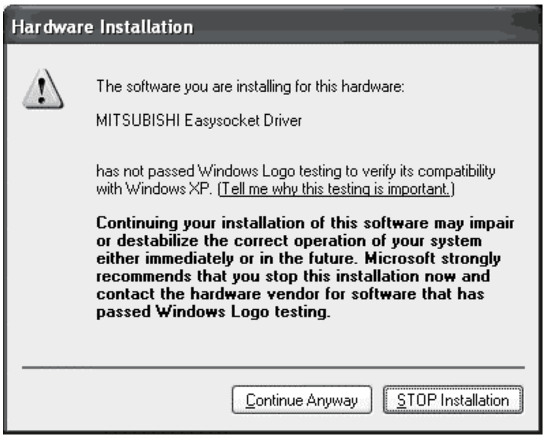
C:\MELSEC\Easysocket\USBDrivers

○ Don't search. I will choose the driver to install.

Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.

2) As the screen on the left appears, choose "Include this location in the search".
Check "Include this location in the search" and set "Easysocket\USBDrivers" of the folder where GX Configurator-QP was installed.
After setting, click the Next>.
The screen shown on the left shows the example of setting C:\MELSEC\Easysocket\USBDrivers.
If volume MELSOFT products have been installed, browse the installation destination of the first product.

↓



The software you are installing for this hardware:

MITSUBISHI Easysocket Driver

has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

3) As the screen on the left appears, click the Continue Anyway.

REMARKS

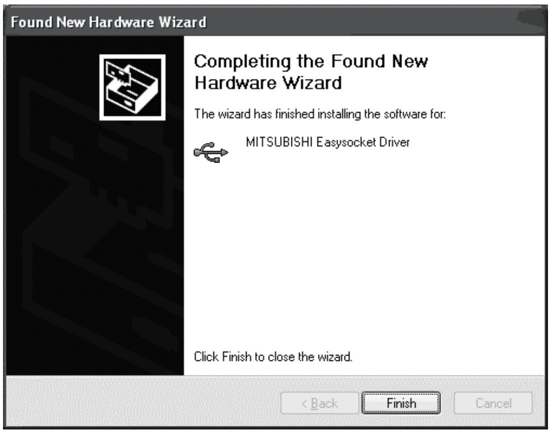
Though the screen on the left appears during installation of the USB driver, we have confirmed that the USB driver operates properly using Windows® XP.
(No problem will occur after installation of the USB driver.)
Click Continue Anyway to continue the installation of the USB driver.

↓

(To the next page)

(From the previous page)

↓



Completing the Found New Hardware Wizard

The wizard has finished installing the software for:

MITSUBISHI Easysocket Driver

Click Finish to close the wizard.

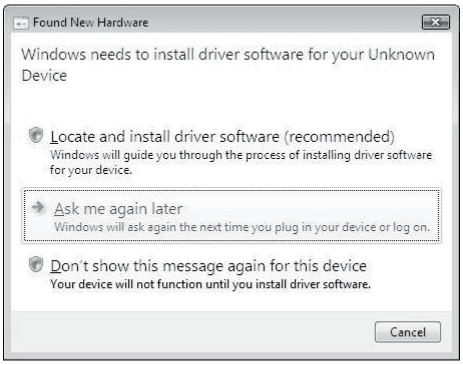
↓

(Completion)

4) The screen on the left appears to indicate completion of installation.
   Click the Finish to terminate installation.

[3] When Windows Vista® is used

The following shows installation procedure of USB driver when using Windows Vista® .



Found New Hardware

Windows needs to install driver software for your Unknown Device

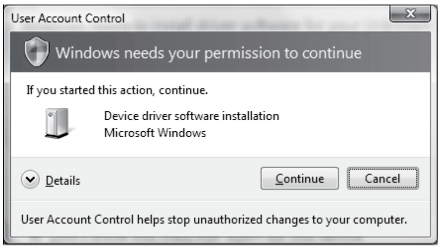
Locate and install driver software (recommended)
Windows will guide you through the process of installing driver software for your device.

Ask me again later
Windows will ask again the next time you plug in your device or log on.

Don't show this message again for this device
Your device will not function until you install driver software.

1) The screen shown on the left appears when the personal computer and the CPU module is connected with USB cable. Choose "Locate and install driver software (recommended)" and wait until searching ends.

＊ : When user account control is enabled, the following screen appears.
Click the Continue button.



User Account Control

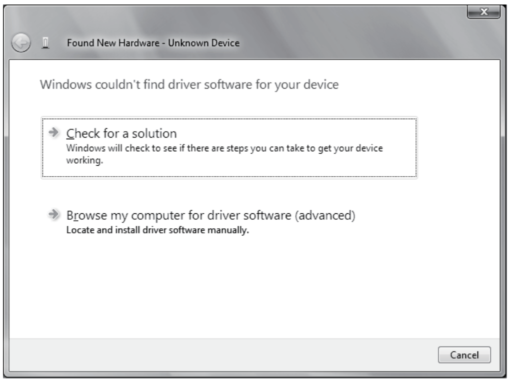
Windows needs your permission to continue

If you started this action, continue.

Device driver software installation
Microsoft Windows

User Account Control helps stop unauthorized changes to your computer.

↓



Found New Hardware - Unknown Device

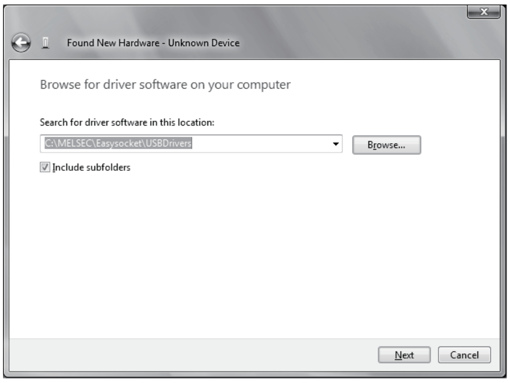
Windows couldn't find driver software for your device

Check for a solution
Windows will check to see if there are steps you can take to get your device working.

Browse my computer for driver software (advanced)
Locate and install driver software manually.

2) The left screen appears. Choose "Browse my computer for driver software (advanced)".

↓



Found New Hardware - Unknown Device

Browse for driver software on your computer

Search for driver software in this location:
C:\MELSEC\Easysocket\USBDrivers

☑ Include subfolders

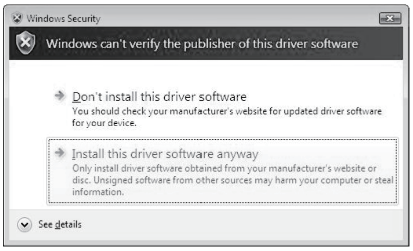
3) The left screen appears. Set installation location of GX Developer, "Easysocket\USBdrivers".
Then, click the Next> button.
The left screen shows an example when C:\MELSEC\Easysocket\USBdrivers is set.
If multiple MELSOFT products have been installed, refer to the installation location of the first installed product.

↓

(To the next page)

(From the previous page)

↓



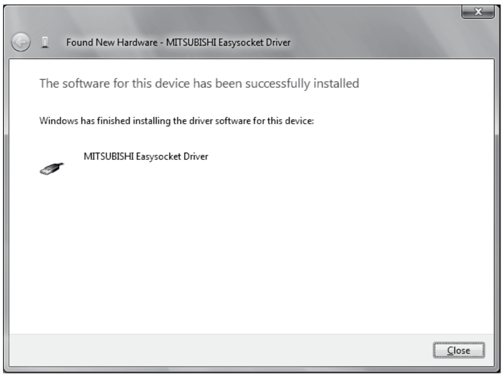
Windows can't verify the publisher of this driver software

Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.

Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.

4) The left screen appears. Select "Install this driver software anyway".

↓



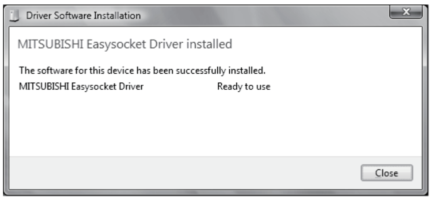
The software for this device has been successfully installed

Windows has finished installing the driver software for this device:

MITSUBISHI Easysocket Driver

5) The left screen appears. Click the Close button.

↓



MITSUBISHI Easysocket Driver installed

The software for this device has been successfully installed.

MITSUBISHI Easysocket Driver	Ready to use

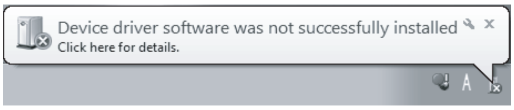
6) The left screen appears when the installation is completed.
Click the Close button to exit.

↓

(Completion)

[4] When Windows® 7 is used

The following shows installation procedure of USB driver when using Windows® 7.

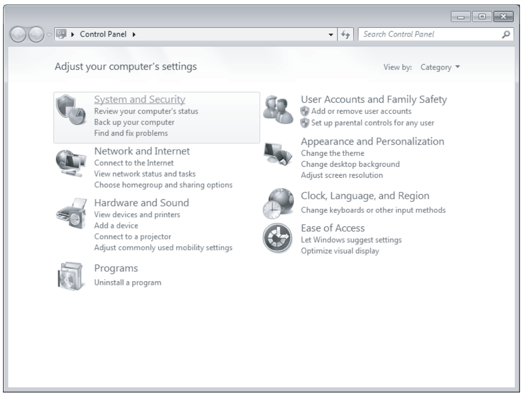


Device driver software was not successfully installed

Click here for details.

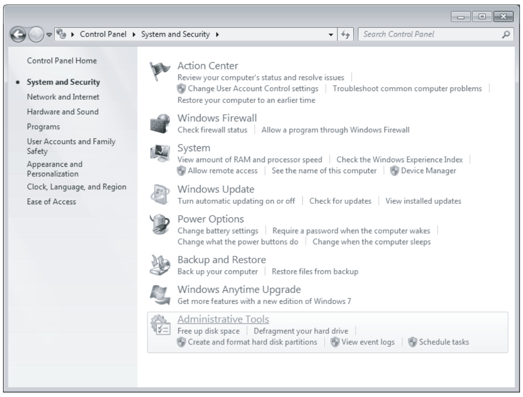
1) The message shown on the left appears when the personal computer is connected to the CPU module with a USB cable.

↓


Control Panel
Search Control Panel
Adjust your computer's settings
View by: Category
System and Security
Review your computer's status
Back up your computer
Find and fix problems
Network and Internet
Connect to the Internet
View network status and tasks
Choose homegroup and sharing options
Hardware and Sound
View devices and printers
Add a device
Connect to a projector
Adjust commonly used mobility settings
Programs
Uninstall a program
User Accounts and Family Safety
Add or remove user accounts
Set up parental controls for any user
Appearance and Personalization
Change the theme
Change desktop background
Adjust screen resolution
Clock, Language, and Region
Change keyboards or other input methods
Ease of Access
Let Windows suggest settings
Optimize visual display

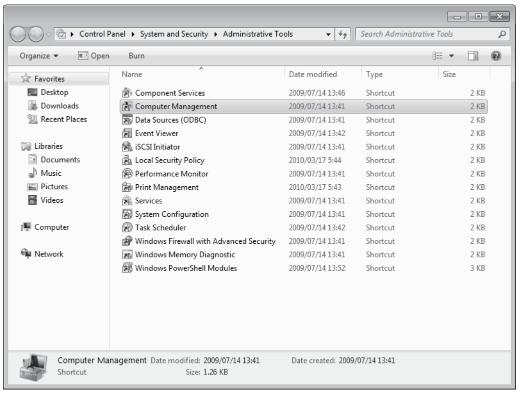
2) Select "System and Security" from the Control Panel.
To display the Control Panel, select [Start] - [Control Panel].

↓


Control Panel
System and Security
Search Control Panel
Control Panel Home
System and Security
Network and Internet
Hardware and Sound
Programs
User Accounts and Family Safety
Appearance and Personalization
Clock, Language, and Region
Ease of Access
Action Center
Review your computer's status and resolve issues
Change User Account Control settings
Troubleshoot common computer problems
Restore your computer to an earlier time
Windows Firewall
Check firewall status
Allow a program through Windows Firewall
System
View amount of RAM and processor speed
Check the Windows Experience Index
Allow remote access
See the name of this computer
Device Manager
Windows Update
Turn automatic updating on or off
Check for updates
View installed updates
Power Options
Change battery settings
Require a password when the computer wakes
Change what the power buttons do
Change when the computer sleeps
Backup and Restore
Back up your computer
Restore files from backup
Windows Anytime Upgrade
Get more features with a new edition of Windows 7
Administrative Tools
Free up disk space
Defragment your hard drive
Create and format hard disk partitions
View event logs
Schedule tasks

3) The screen shown on the left appears. Select "Administrative Tools".

↓



Name	Date modified	Type	Size
Component Services	2009/07/14 13:46	Shortcut	2 KB
Computer Management	2009/07/14 13:41	Shortcut	2 KB
Data Sources (ODBC)	2009/07/14 13:41	Shortcut	2 KB
Event Viewer	2009/07/14 13:42	Shortcut	2 KB
iSCSI Initiator	2009/07/14 13:41	Shortcut	2 KB
Local Security Policy	2010/03/17 5:44	Shortcut	2 KB
Performance Monitor	2009/07/14 13:41	Shortcut	2 KB
Print Management	2010/03/17 5:43	Shortcut	2 KB
Services	2009/07/14 13:41	Shortcut	2 KB
System Configuration	2009/07/14 13:41	Shortcut	2 KB
Task Scheduler	2009/07/14 13:42	Shortcut	2 KB
Windows Firewall with Advanced Security	2009/07/14 13:41	Shortcut	2 KB
Windows Memory Diagnostic	2009/07/14 13:41	Shortcut	2 KB
Windows PowerShell Modules	2009/07/14 13:52	Shortcut	3 KB

Computer Management Date modified: 2009/07/14 13:41 Date created: 2009/07/14 13:41
Shortcut Size: 1.26 KB

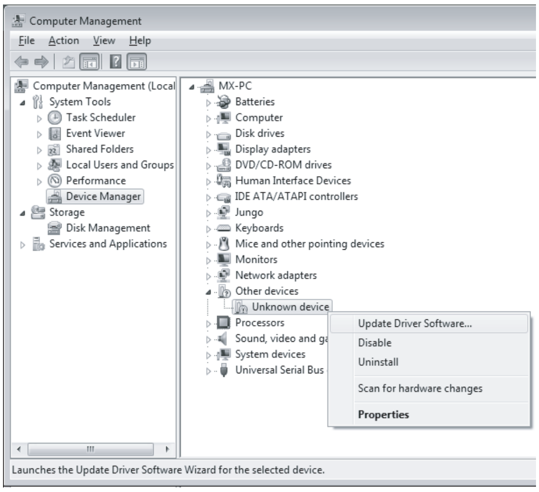
4) The screen shown on the left appears. Select "Computer Management".

↓

(To the next page)

(From the previous page)

↓

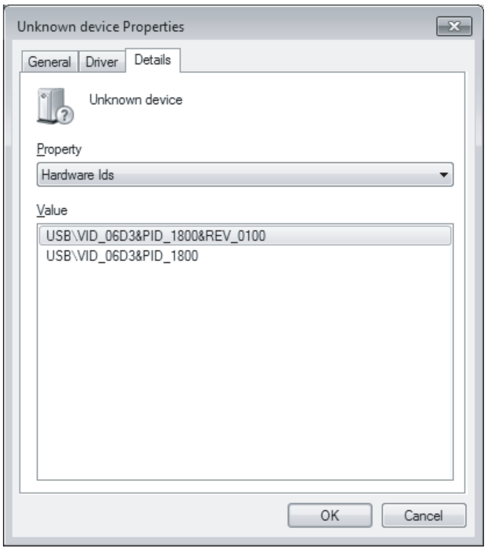


Launches the Update Driver Software Wizard for the selected device.

5) Right-click "Unknown device" in the Windows Device Manager as shown left, and select "Update Driver Software…".

REMARKS

If multiple 'Unknown devices' exist therefore cannot be specified, right-click "Unknown device" as shown left and select "Properties". The "Unknown device", whose "Hardware Ids" is "USB\VID_06D3&PID_1800" on the <<Details>> tab of the properties screen, is the update target.

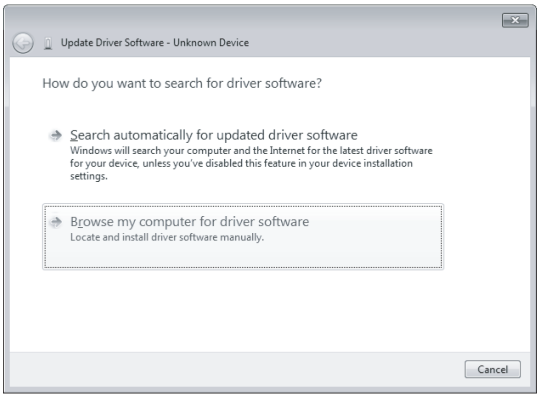


Unknown device

Property: Hardware Ids

Value:
USB\VID_06D3&PID_1800&REV_0100
USB\VID_06D3&PID_1800

↓



Update Driver Software - Unknown Device

How do you want to search for driver software?

Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

Browse my computer for driver software
Locate and install driver software manually.

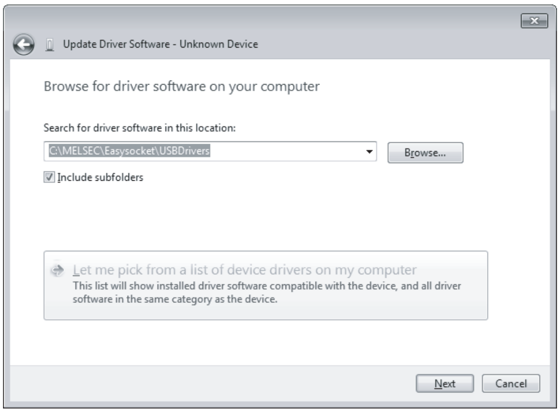
6) The screen shown on the left appears. Select "Browse my computer for driver software".

↓

(To the next page)

(From the previous page)

↓



Update Driver Software - Unknown Device

Browse for driver software on your computer

Search for driver software in this location:

C:\MELSEC\Easysocket\USBDrivers

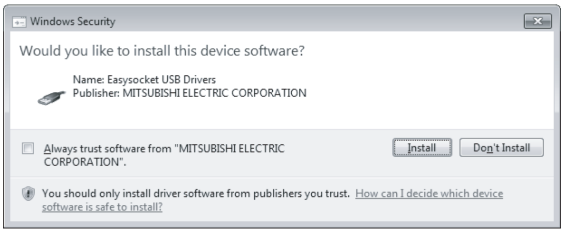
☑ Include subfolders

Let me pick from a list of device drivers on my computer

This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

7) The screen shown on the left appears. Set installation location of GX Configurator-QP, "Easysocket\USBdrivers".
Then, click the Next> button.
The left screen is an example when C:\MELSEC\Easysocket\USBdrivers is set.
If multiple MELSOFT products have been installed, refer to the installation location of the first installed product.

↓



Windows Security

Would you like to install this device software?

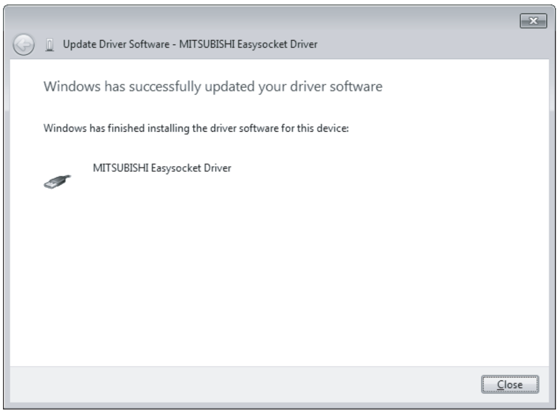
Name: Easysocket USB Drivers
Publisher: MITSUBISHI ELECTRIC CORPORATION

☐ Always trust software from "MITSUBISHI ELECTRIC CORPORATION".

You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

8) The screen shown on the left appears. Click the Install button.

↓



Update Driver Software - MITSUBISHI Easysocket Driver

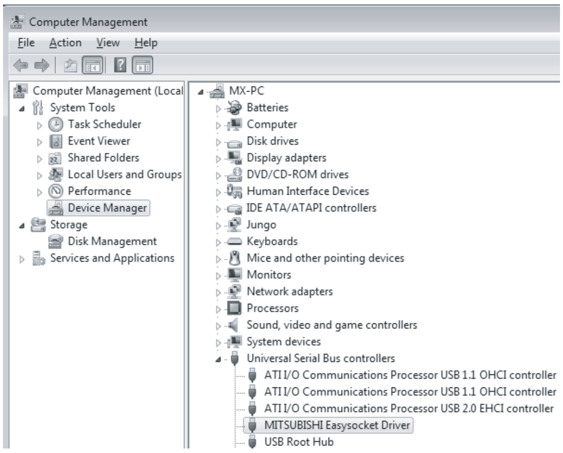
Windows has successfully updated your driver software

Windows has finished installing the driver software for this device:

MITSUBISHI Easysocket Driver

9) The screen shown on the left appears. Click the Close button.

↓



Computer Management
File
Action
View
Help
Computer Management (Local
System Tools
Task Scheduler
Event Viewer
Shared Folders
Local Users and Groups
Performance
Device Manager
Storage
Disk Management
Services and Applications
MX-PC
Batteries
Computer
Disk drives
Display adapters
DVD/CD-ROM drives
Human Interface Devices
IDE ATA/ATAPI controllers
Jungo
Keyboards
Mice and other pointing devices
Monitors
Network adapters
Processors
Sound, video and game controllers
System devices
Universal Serial Bus controllers
ATI I/O Communications Processor USB 1.1 OHCI controller
ATI I/O Communications Processor USB 1.1 OHCI controller
ATI I/O Communications Processor USB 2.0 EHCI controller
MITSUBISHI Easysocket Driver
USB Root Hub

10) "MITSUBISHI Easysocket Driver" is registered under "Universal Serial Bus controllers".

↓

(Completion)

4.1.4 Upgrading the USB drivers

In Windows Vista® or Windows® 7, if MELSOFT incompatible with each operating system has been installed when MELSOFT compatible with each operating system is installed, upgrading the USB drivers is required.

The USB driver has the following two types:
- USB driver for CPU module connection
- USB driver for GOT connection (used for the GOT transparent mode.)

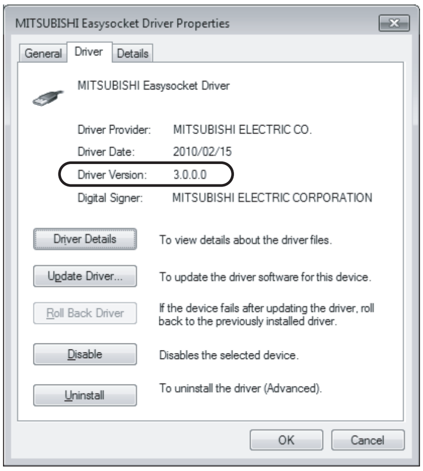
(1) Procedure for upgrading the USB driver for CPU module connection

(a) Check method

Whether upgrade of the USB driver is required or not can be checked by the USB driver version.

Start the Windows Device Manager while the personal computer is connected to the CPU module with USB, right-click "MITSUBISHI Easysocket Driver" and select "Properties".

Update is necessary if the version shown in the<<Driver>> tab of the properties screen is the following.
- Windows Vista® : "2.0.0.0" or earlier
- Windows® 7 : "3.0.0.0" or earlier



MITSUBISHI Easysocket Driver

Driver Provider: MITSUBISHI ELECTRIC CO.

Driver Date: 2010/02/15

Driver Version: 3.0.0.0

Digital Signer: MITSUBISHI ELECTRIC CORPORATION

To view details about the driver files.

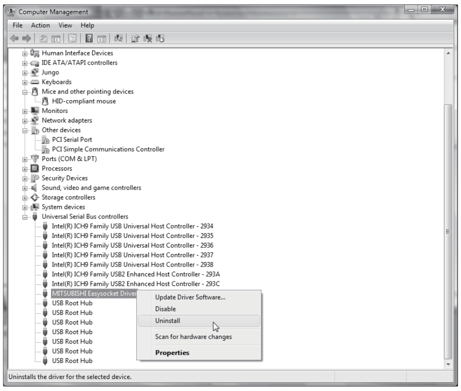
To update the driver software for this device.

If the device fails after updating the driver, roll back to the previously installed driver.

Disables the selected device.

To uninstall the driver (Advanced).

(b) Upgrade procedure


Computer Management
File
Action
View
Help
Human Interface Devices
IDE ATA/ATAPI controllers
Jungo
Keyboards
Mice and other pointing devices
HID-compliant mouse
Monitors
Network adapters
Other devices
PCI Serial Port
PCI Simple Communications Controller
Ports (COM & LPT)
Processors
Security Devices
Sound, video and game controllers
Storage controllers
System devices
Universal Serial Bus controllers
Intel(R) ICH9 Family USB Universal Host Controller - 2934
Intel(R) ICH9 Family USB Universal Host Controller - 2935
Intel(R) ICH9 Family USB Universal Host Controller - 2936
Intel(R) ICH9 Family USB Universal Host Controller - 2937
Intel(R) ICH9 Family USB Universal Host Controller - 2938
Intel(R) ICH9 Family USB2 Enhanced Host Controller - 293A
Intel(R) ICH9 Family USB2 Enhanced Host Controller - 293C
MITSUBISHI Easysocket Driver
USB Root Hub
USB Root Hub
USB Root Hub
USB Root Hub
USB Root Hub
USB Root Hub
USB Root Hub
Update Driver Software...
Disable
Uninstall
Scan for hardware changes
Properties

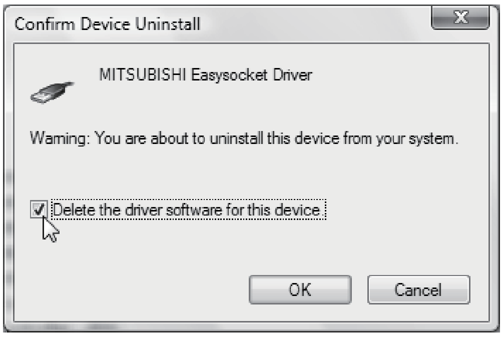
Uninstalls the driver for the selected device.

1) Connect the personal computer to the CPU module with USB cable.

2) Start the Windows Device Manager, right-click "MITSUBISHI Easysocket Driver", and select "Uninstall".

↓
(To the next page)

(From the previous page)
↓



Confirm Device Uninstall

MITSUBISHI Easysocket Driver

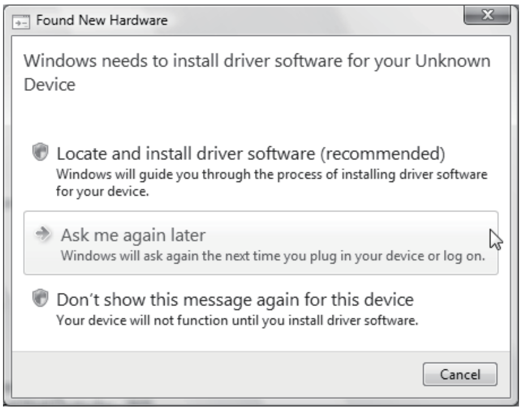
Warning: You are about to uninstall this device from your system.

☑ Delete the driver software for this device.

3) The warning dialog box shown on the left appears. Select "Delete the driver software for this device." and click the OK button.

4) Disconnect the USB cable and reconnect it to the same USB port after 5 seconds.

[Windows Vista®]
The confirmation dialog box the following screen appears.
Select "Ask me again later".



Found New Hardware

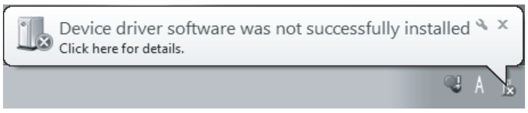
Windows needs to install driver software for your Unknown Device

Locate and install driver software (recommended)
Windows will guide you through the process of installing driver software for your device.

Ask me again later
Windows will ask again the next time you plug in your device or log on.

Don't show this message again for this device
Your device will not function until you install driver software.

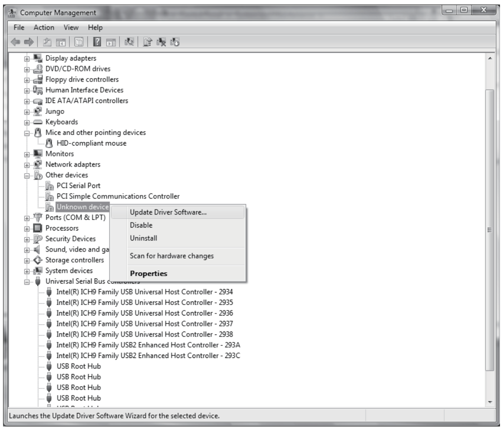
[Windows® 7]
The following balloon appears for a little while.



Device driver software was not successfully installed
Click here for details.

↓
(To the next page)

(From the previous page)
↓

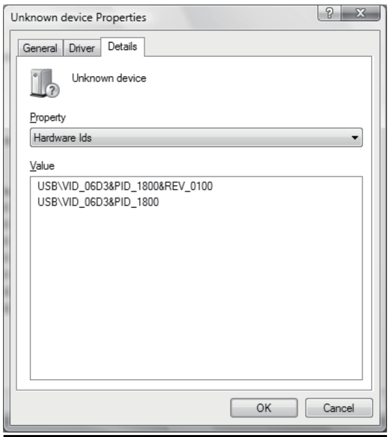

Computer Management
File
Action
View
Help
Display adapters
DVD/CD-ROM drives
Floppy drive controllers
Human Interface Devices
IDE ATA/ATAPI controllers
Jungo
Keyboards
Mice and other pointing devices
HID-compliant mouse
Monitors
Network adapters
Other devices
PCI Serial Port
PCI Simple Communications Controller
Unknown device
Ports (COM & LPT)
Processors
Security Devices
Sound, video and ga
Storage controllers
System devices
Universal Serial Bus controllers
Intel(R) ICH9 Family USB Universal Host Controller - 2934
Intel(R) ICH9 Family USB Universal Host Controller - 2935
Intel(R) ICH9 Family USB Universal Host Controller - 2936
Intel(R) ICH9 Family USB Universal Host Controller - 2937
Intel(R) ICH9 Family USB Universal Host Controller - 2938
Intel(R) ICH9 Family USB2 Enhanced Host Controller - 293A
Intel(R) ICH9 Family USB2 Enhanced Host Controller - 293C
USB Root Hub
USB Root Hub
USB Root Hub
USB Root Hub
Update Driver Software...
Disable
Uninstall
Scan for hardware changes
Properties

Launches the Update Driver Software Wizard for the selected device.

5) Right-click "Unknown device" in the Windows Device Manager and select "Update Driver Software…".

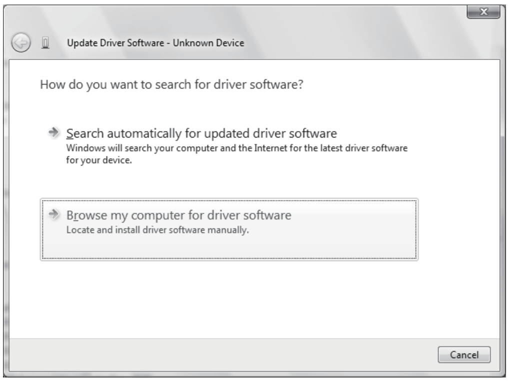
REMARKS

If there are several unknown devices and a driver to be upgraded cannot be specified, right-click "Unknown device" and select "Properties".
The "Unknown device", whose "Hardware Ids" is "USB\VID_06D3&PID_1800" in the "Details" tab of the "Unknown device Properties" dialog box, is the upgrade target.



Property: Hardware Ids

Value:
USB\VID_06D3&PID_1800&REV_0100
USB\VID_06D3&PID_1800



How do you want to search for driver software?

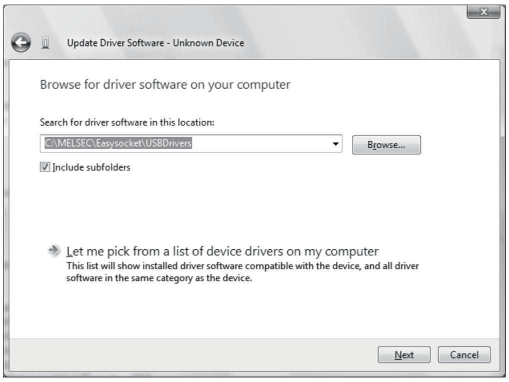
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device.

Browse my computer for driver software
Locate and install driver software manually.

6) The dialog box shown on the left appears.
Select "Browse my computer for driver software".

↓
(To the next page)

(From the previous page)
↓



Browse for driver software on your computer

Search for driver software in this location:

C:\MELSEC\Easysocket\USBDrivers

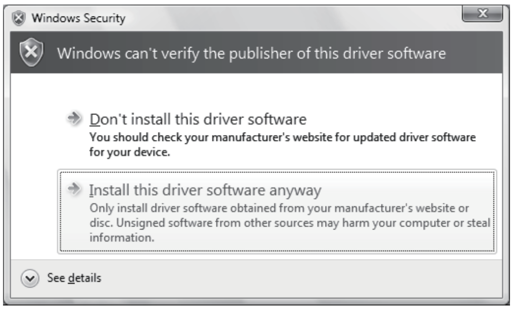
☑ Include subfolders

Let me pick from a list of device drivers on my computer

This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

7) The dialog box shown on the left appears.
Set the installation location of this product, "Easysocket\USBdrivers" and click Next.
The left dialog box shows an example when "C:\MELSEC\Easysocket\USBdrivers" is set.
When multiple MELSOFT products have been installed, set the installation location of the first-installed product.

[Windows Vista®]



Windows can't verify the publisher of this driver software

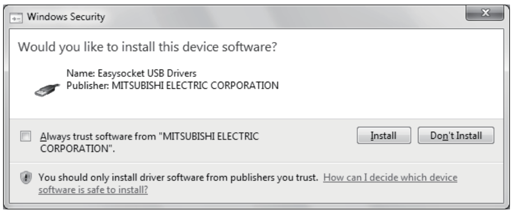
Don't install this driver software

You should check your manufacturer's website for updated driver software for your device.

Install this driver software anyway

Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.

[Windows® 7]



Would you like to install this device software?

Name: Easysocket USB Drivers
Publisher: MITSUBISHI ELECTRIC CORPORATION

☐ Always trust software from "MITSUBISHI ELECTRIC CORPORATION".

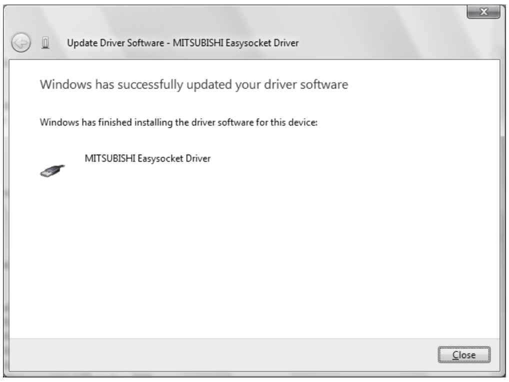
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

8) If the confirmation dialog box shown on the left appears, select "Install this driver software anyway" or Install.

↓
(To the next page)

(From the previous page)

↓



Update Driver Software - MITSUBISHI Easysocket Driver

Windows has successfully updated your driver software

Windows has finished installing the driver software for this device:

MITSUBISHI Easysocket Driver

↓

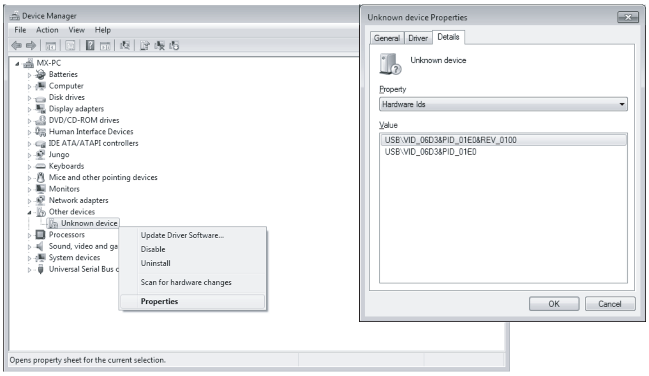
(Completion)

9) The confirmation dialog box shown on the left appears. Select Close . Upgrade is completed.

(2) Procedure for upgrading the USB driver for GOT connection

(a) Check method

While the personal computer is connected to GOT with USB, power off and then on the GOT and then start the Windows Device Manager.
If "MITSUBISHI GOT1000 USB Controller" is not displayed under "Universal Serial Bus controllers", and "Unknown device" is displayed under "Other devices", the driver needs to be upgraded.
The "Unknown device", whose "Hardware Ids" is "USB\VID_06D3&PID_01E0" in the "Details" tab of the "Unknown device Properties" dialog box, is the upgrade target.



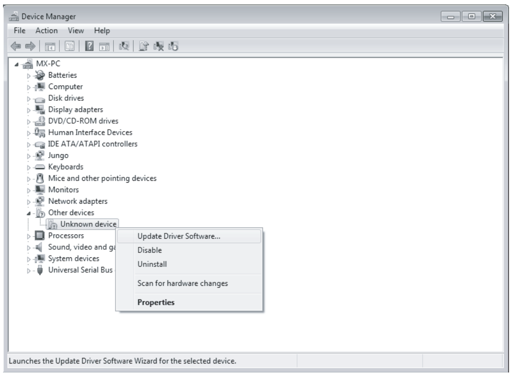
Property: Hardware Ids

Value:
USB\VID_06D3&PID_01E0&REV_0100
USB\VID_06D3&PID_01E0

Opens property sheet for the current selection.

(b) Upgrade procedure

1) Connect the personal computer to the GOT with USB cable.
2) Start the Windows Device Manager, right-click "Unknown device", and select "Update Driver Software…".

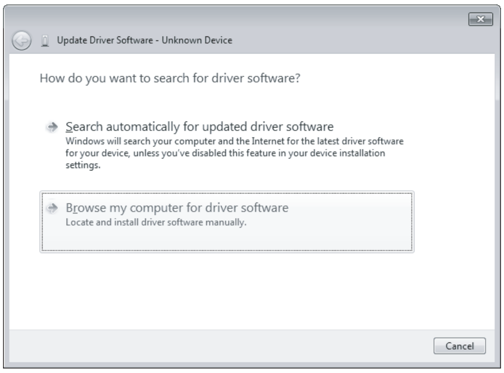


Launches the Update Driver Software Wizard for the selected device.

↓
(To the next page)

(From the previous page)

↓



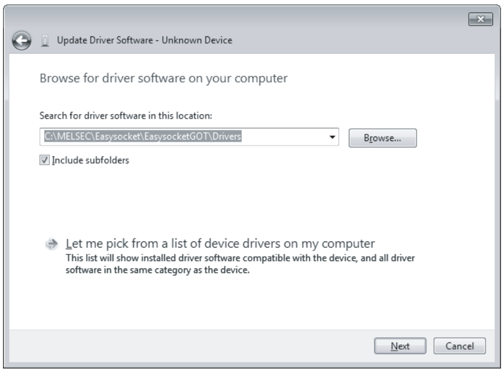
How do you want to search for driver software?

Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

Browse my computer for driver software
Locate and install driver software manually.

3) The confirmation dialog box shown on the left appears.
Select "Browse my computer for driver software".

↓



Browse for driver software on your computer

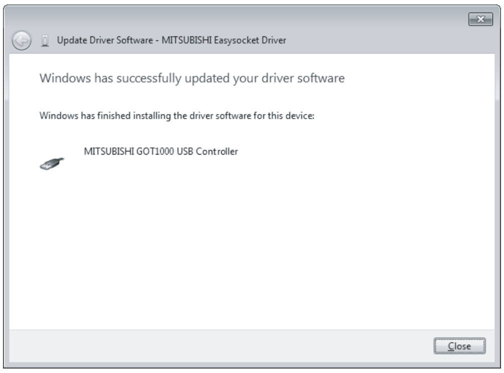
Search for driver software in this location:
C:\MELSEC\Easysocket\EasysocketGOT\Drivers

☑ Include subfolders

Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

4) The dialog box shown on the left appears.
Set the installation location of this product, "EZSocket\EZSocketGOT\Drivers" and click Next.
The left dialog box shows an example when "C:\MELSEC\EZSocket\EZSocketGOT\Drivers" is set.
When multiple MELSOFT products have been installed, set the installation location of the first-installed product.

↓



Windows has successfully updated your driver software

Windows has finished installing the driver software for this device:

MITSUBISHI GOT1000 USB Controller

5) The confirmation dialog box shown on the left appears.
Select Close. Upgrade is completed.

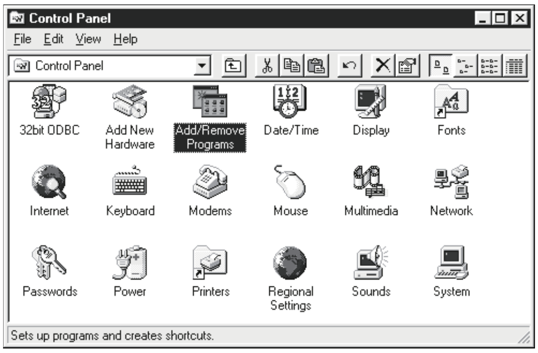
↓

(Completion)

4.2 Uninstallation

This section explains the operation for removing GX Configurator-QP from the hard disk.
Displayed screens may differ depending on the operating system. In such a case, uninstall GX Configurator-QP with referring to "Remarks".

(1) Uninstalling GX Configurator-QP

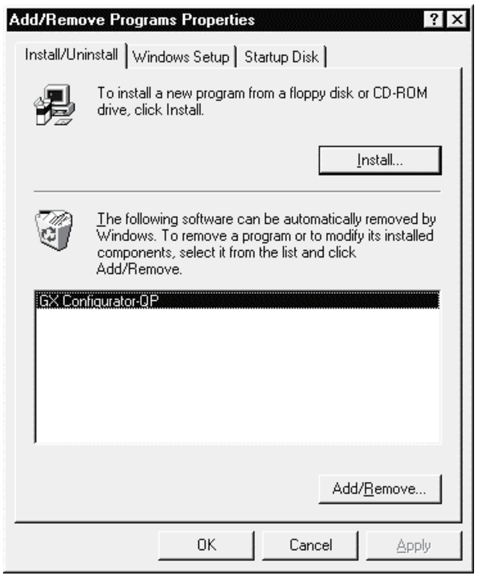


↓
(To the next page)

1) Double-click "Add/Remove Programs" on the Control Panel.
To display the Control Panel, choose [Start] → [Settings] → [Control Panel].

REMARKS

When using Windows® XP, choose "Add or Remove Programs" from the Control Panel.
For Windows Vista® and Windows® 7, select "Uninstall a program" in the "Control Panel" window.
To display the Control Panel, choose [Start] - [Control Panel].



To install a new program from a floppy disk or CD-ROM drive, click Install.

The following software can be automatically removed by Windows. To remove a program or to modify its installed components, select it from the list and click Add/Remove.

GX Configurator-QP

↓

(To the next page)

2) Choose "GX Configurator-QP".
After selection, click Add/Remove.

REMARKS

The screen shown on the left is the one for Windows® 98.
The displayed screen varies with the operating system.
Depending on the used operating system, perform the following operation.

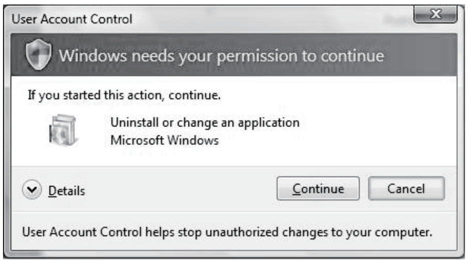
<Windows® 2000 Professional and Windows® XP>
(a) Click "Add/Remove Programs".
(b) Choose "GX Configurator-QP".
(c) Click the Change/Remove button.

<Windows Vista® >
Select "GX Configurator-QP" in the "Uninstall or change a program" window and click "Uninstall/Change".＊

<Windows® 7>
Double-click "GX Configurator-QP" in the "Uninstall or change a program" window.＊

＊ : When user account control is enabled in Windows Vista® , the following screen appears.
Click Continue or Yes.

[Windows Vista®]



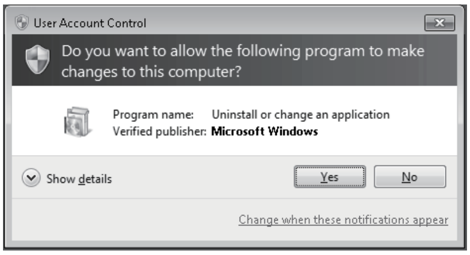
Windows needs your permission to continue

If you started this action, continue.

Uninstall or change an application
Microsoft Windows

User Account Control helps stop unauthorized changes to your computer.

[Windows® 7]

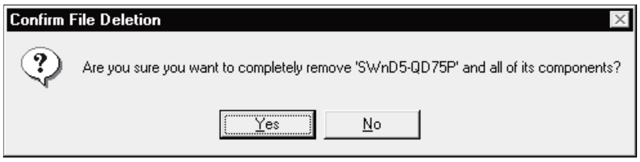


Do you want to allow the following program to make changes to this computer?

Program name: Uninstall or change an application
Verified publisher: Microsoft Windows

(From the preceding page)

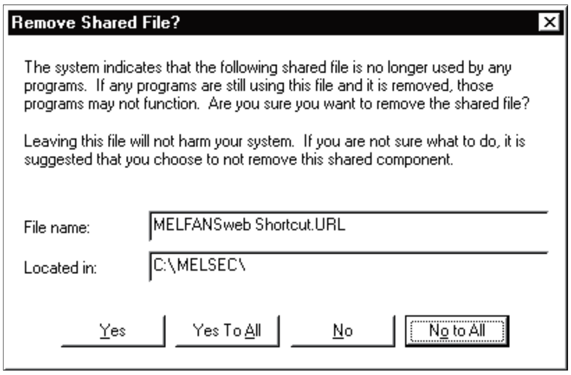
↓


Confirm File Deletion

Are you sure you want to completely remove 'SWnD5-QD75P' and all of its components?

3) Confirm that the file may be removed.
Clicking the Yes button starts uninstallation.
Clicking the No button stops uninstallation.

↓


Remove Shared File?

The system indicates that the following shared file is no longer used by any programs. If any programs are still using this file and it is removed, those programs may not function. Are you sure you want to remove the shared file?

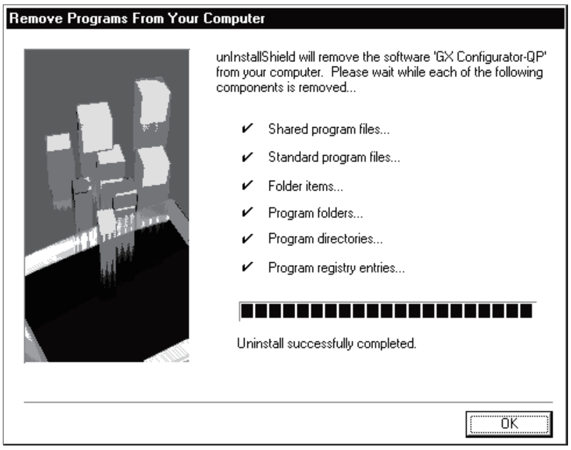
Leaving this file will not harm your system. If you are not sure what to do, it is suggested that you choose to not remove this shared component.

File name: MELFANSweb Shortcut.URL

Located in: C:\MELSEC\

4) If the left screen has appeared, click the No To All button.
If you click the Yes or Yes To All button, the shared file of the Windows® compatible MELSOFT software is removed. Therefore, click the No To All button when removing GX Configurator-QP only.

↓


Remove Programs From Your Computer

unInstallShield will remove the software 'GX Configurator-QP' from your computer. Please wait while each of the following components is removed...

✓ Shared program files...
✓ Standard program files...
✓ Folder items...
✓ Program folders...
✓ Program directories...
✓ Program registry entries...

Uninstall successfully completed.

5) When the removal completed message appears, click the OK button.

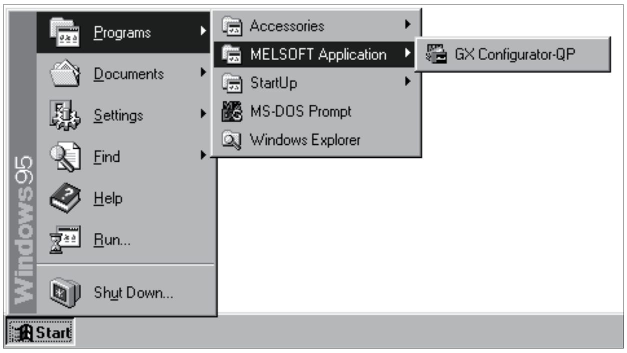
When the completed message appears, uninstallation is complete.

↓

(Completion)

4.3 Starting GX Configurator-QP

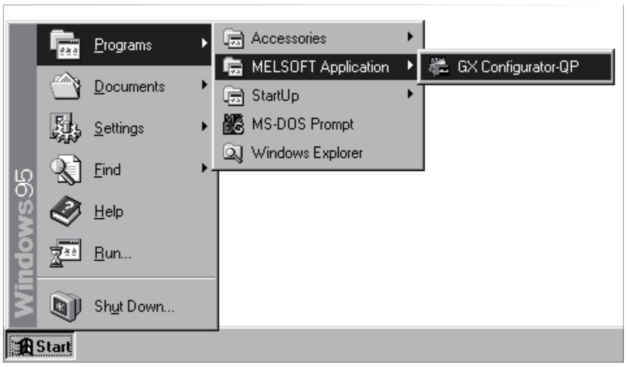
This section explains how to start GX Configurator-QP from the start menu.



1) Move the cursor from [Start] → [Programs*] → [MELSOFT Application].

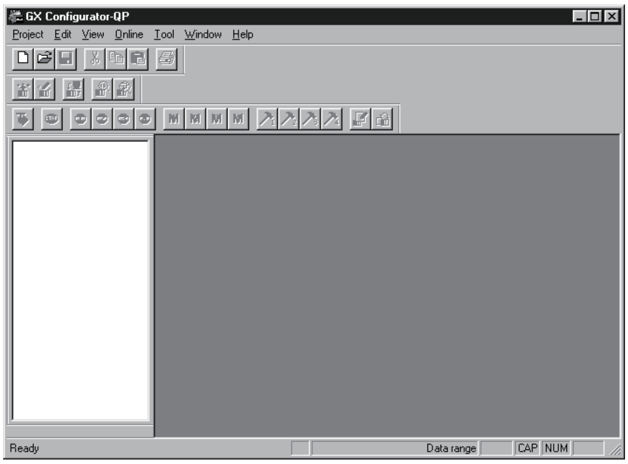
* : [All Programs] is shown for Windows® XP, Windows Vista®, and Windows® 7.

↓



2) Click [GX Configurator-QP].

↓

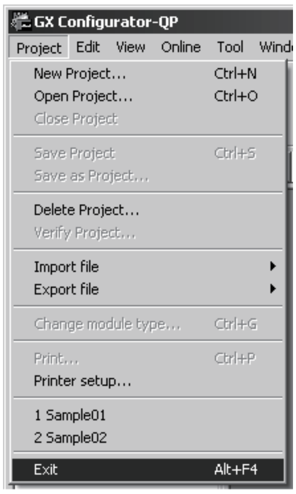


3) GX Configurator-QP starts.

4.4 Exiting GX Configurator-QP

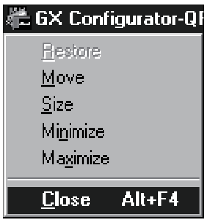
This section describes how to exit GX Configurator-QP.

(1) Menu-driven exit method



Click the [Project] → [Exit] menu.
GX Configurator-QP ends.

(2) Title bar-driven exit method



Click and choose [Close].
Alternatively, click ☒ at the right end of the title bar.

Point

In the online status such as the monitor or test mode, you cannot exit GX Configurator-QP.
In any of the following cases, end the program after choosing the offline status.
Monitor mode (refer to Section 10.2)
Test mode (refer to Section 10.4)
Online status for checking connect (refer to Section 7.4)

REMARK

When a new project has been created or a project has been modified but is not yet saved, the confirmation dialog box appears to ask you whether you will save that project or not.
When you do not want to save it, click the No button.
When you want to save it, click the Yes button.
When you save a new project, choose [Save as Project].
For further information, refer to Section 6.1.

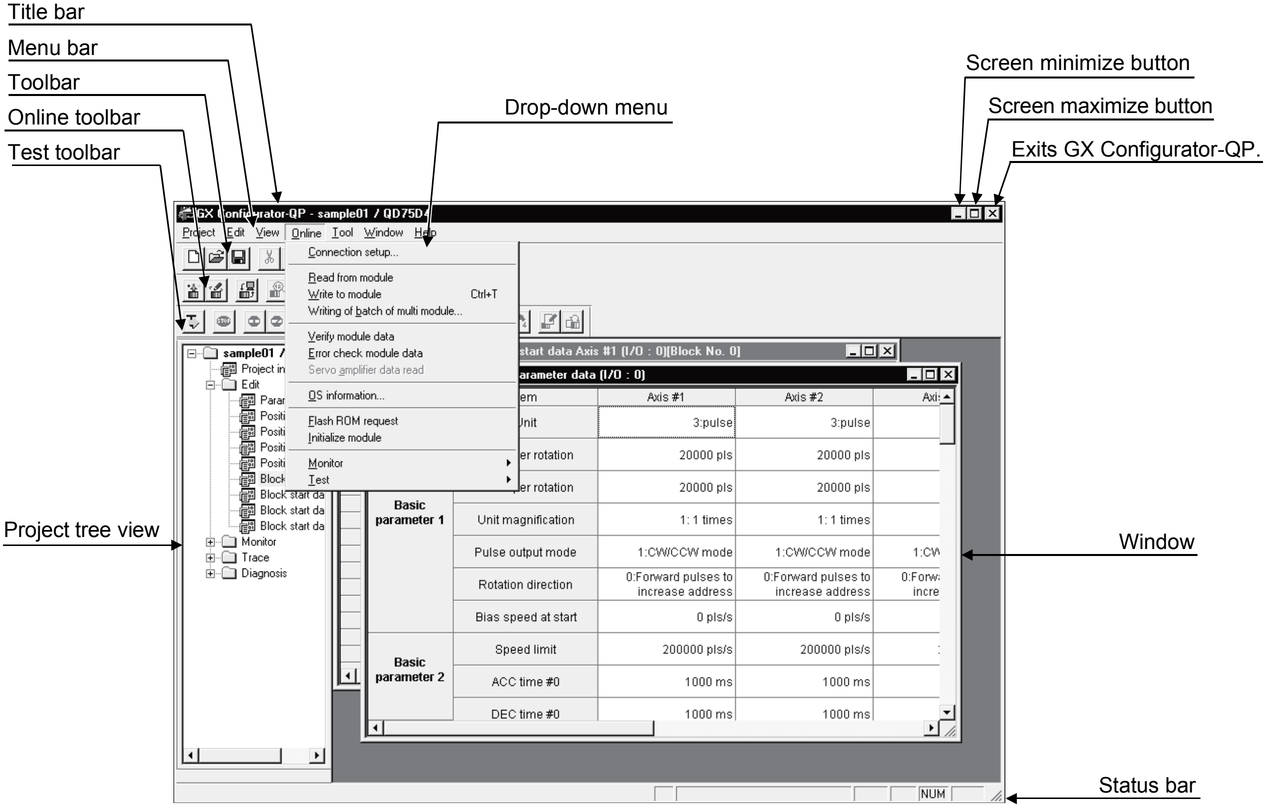
MEMO

5. SCREEN MAKEUP AND BASIC OPERATIONS

This chapter explains the screen makeup and the display selection, window arrangement and other operations of GX Configurator-QP.

5.1 Screen Makeup and Display Selection

This section provides the screen makeup of GX Configurator-QP.



	em	Axis #1	Axis #2	Axi
	Unit	3:pulse	3:pulse	
	er rotation	20000 pls	20000 pls	
	er rotation	20000 pls	20000 pls	
Basic parameter 1	Unit magnification	1: 1 times	1: 1 times	
	Pulse output mode	1:CW/CCW mode	1:CW/CCW mode	1:CW
	Rotation direction	0:Forward pulses to increase address	0:Forward pulses to increase address	0:Forw: incre
	Bias speed at start	0 pls/s	0 pls/s	
Basic parameter 2	Speed limit	200000 pls/s	200000 pls/s	
	ACC time #0	1000 ms	1000 ms	
	DEC time #0	1000 ms	1000 ms	

(1) Display selection and window arrangement operations

You can use the following drop-down menu to choose to display or hide any toolbar or arrange windows.

Menu Operation	Description
[View] →[Project tree view] [Toolbar] [Test toolbar] [Online toolbar]	Used to display or hide the corresponding toolbar.
[View] → [Status bar]	Used to display or hide the status bar.
[View] → [Select block start no]	Used to choose any of block numbers 0 to 4 to be displayed on the block start data edit window. (Refer to Section 8.5.1)
[Window] → [Cascade]	Used to overlap multiple windows. The above screen gives a cascade example
[Window] → [Tile vertically]	Used to lay multiple windows side by side.
[Window] → [Arrange icons]	Used to arrange windows which have been reduced to small icons (minimized).
[Window] → [All close]	Used to close all open windows.

5.2 Basic Operations

(1) Basic operation for project tree view

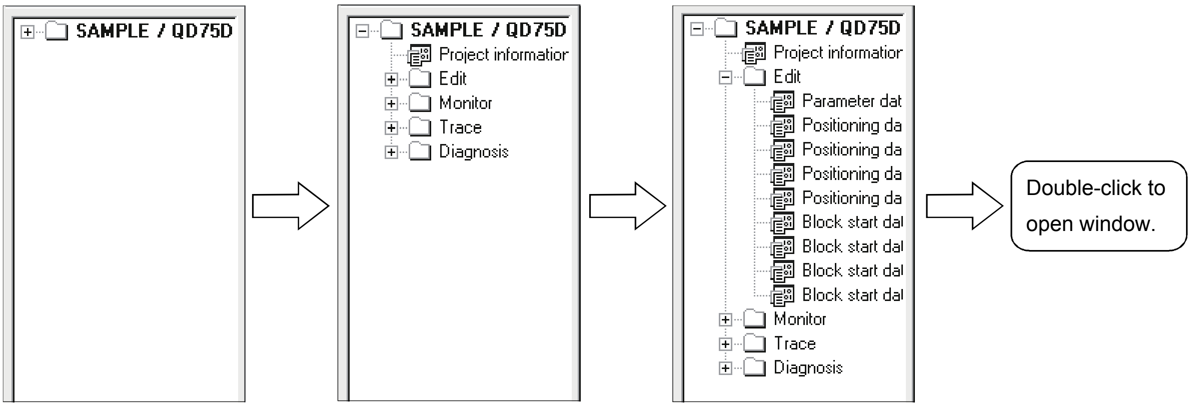
(a) Opening a window

The currently open project appears on the project tree view. Double-click the project name or click ⊞ to show its functions. (From the keyboard, choose the project name and press the "→" key.)

Double-click the function name or click ⊞ to show the window types. (From the keyboard, choose the function name and press the "→" key.)

Double-click the window name to open that window.

(From the keyboard, choose the window name and press the "Space" key.)



Double-click to open window.

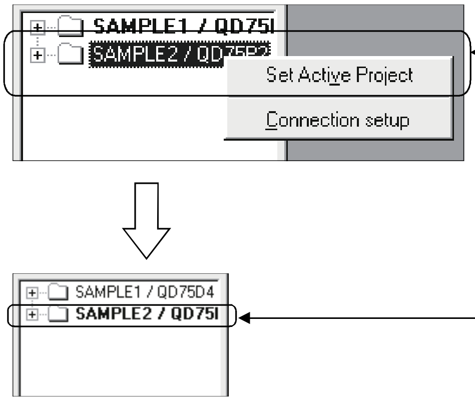
Double-click "SAMPLE".

Double-click "Edit".

(b) Changing the active project

Any online operation except for monitor, sampling (signal) monitor and sampling (buffer) monitor is performed for the module to which the active project is connected, separately from the active window.

To change the active project, right-click the project name and click [Set Active Project].



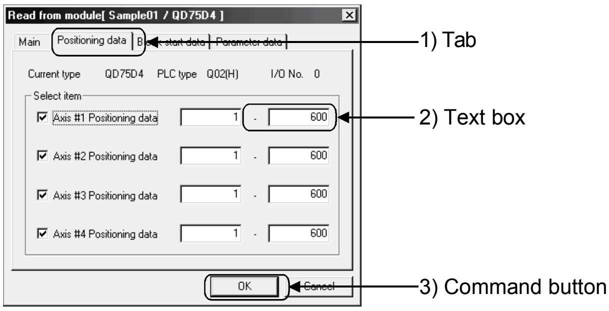
To perform online operation for "SAMPLE2", right-click project name and click [Set Active Project] menu. (From the keyboard, choose "SAMPLE2" and press "Ctrl"+"R" keys.)

"SAMPLE2" appears in boldface type and is set as the active project.

Point

When multiple projects are open, confirm the active project before starting any online operation except for monitor, sampling (signal) monitor and sampling (buffer) monitor.

(2) Basic operation for dialog boxes



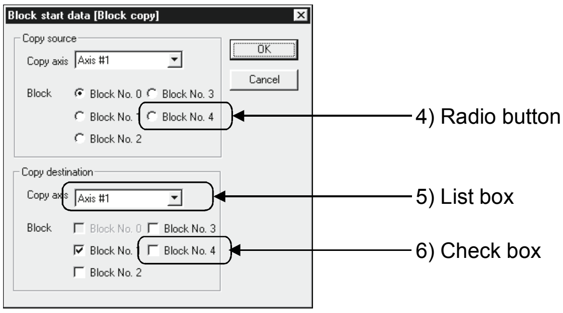
Current type QD75D4 PLC type Q02(H) I/O No. 0

☑ Axis #1 Positioning data 1 - 600
☑ Axis #2 Positioning data 1 - 600
☑ Axis #3 Positioning data 1 - 600
☑ Axis #4 Positioning data 1 - 600

1) Tab
Click the setting item name to select.

2) Text box
Type numerals/characters.

3) Command button
Click this button when executing "OK", "Cancel" etc., or when displaying the dialog box.



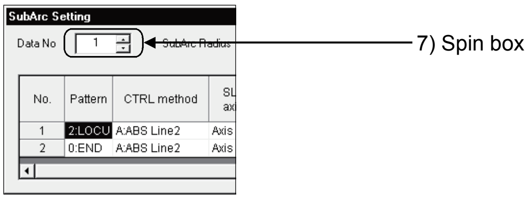
Copy source: Copy axis Axis #1
Block ● Block No. 0 ○ Block No. 3 ○ Block No. 1 ○ Block No. 4 ○ Block No. 2

Copy destination: Copy axis Axis #1
Block ☐ Block No. 0 ☐ Block No. 3 ☑ Block No. 1 ☐ Block No. 4 ☐ Block No. 2

4) Radio button
Click ○ to choose one item among multiple choices.

5) List box
Click ▼ to list choices, then click the item to be chosen.

6) Check box
To execute any item, click ☐ to check it off.



Data No 1

No.	Pattern	CTRL method	SL axi
1	2:LOCU	A:ABS Line2	Axis
2	0:END	A:ABS Line2	Axis

7) Spin box
Used either to type a value directly or to change a value by clicking ⬍.
When typing a value directly, click inside the spin box and enter the value from the keyboard.
When clicking ⬍ to change a value, click ▲ to increase the value, or click ▼ to decrease.

Point

When performing operation from the keyboard, choose the setting item with the "Tab" key.
When there are two or more choices, use the "↔", "→", "↑" and / or "↓" key.

(3) Moving the focus from the keyboard

Use the "Alt" key to move the focus to the drop-down menu.
Use the "F6" key to move the focus between the project tree view and window (edit, monitor, trace, checking connect).

(4) Shortcut key list

The following shortcut keys can be used with GX Configurator-QP.

Shortcut Key	Function (Corresponding Menu Item)	Tool Button	Shortcut Key	Function (Corresponding Menu Item)	Tool Button
Ctrl+N	New project file	🗋	Ctrl+Y	Clear row	—
Ctrl+O	Open project file	📂	Ctrl+B	Select block start no	—
Ctrl+S	Save	💾	Ctrl+T	Write to module	✎
Ctrl+G	Change module type	—	Ctrl+M	Monitor On/Off	🔍
Ctrl+P	Print	🖨	Ctrl+F4	Close active window	—
Ctrl+X	Cut	✂	Ctrl+F6	Change active window	—
Ctrl+C	Copy	📄	F1	Help	—
Ctrl+V	Paste	📋	Alt+F4	Change active window	—
Ctrl+A	Select All	—		Exit/close dialog box	
Ctrl+J	Jump	—			

(5) Tool button list

The following table lists the tool buttons of GX Configurator-QP.

Toolbar Type	Tool Button	Function (Corresponding Menu Item)	Toolbar Type	Tool Button	Function (Corresponding Menu Item)
Toolbar	🗋	New project file	Test toolbar	✓	Test On/Off
	📂	Open project file		STOP	All axis stop command
	💾	Save		❶	Error reset #1
	✂	Cut		❷	Error reset #2
	📄	Copy		❸	Error reset #3
	📋	Paste		❹	Error reset #4
	🖨	Print		M	M code Off #1
Online toolbar	⇧	Read from module		M	M code Off #2
	✎	Write to module		M	M code Off #3
	⇄	Verify module		M	M code Off #4
	🔍	Monitor On/Off		1	Operation Test #1
	🔍	Check module		2	Operation Test #2
				3	Operation Test #3
				4	Operation Test #4
				✎	Positioning data edit in TEST MODE
				⌂	Teaching

6. PROJECT CREATION

A project is a collection of parameters, servo parameters, positioning data and block start data.

<GX Configurator-QP project makeup>

- Project
  - Parameters (Axis #1 to #4)
    There are basic parameters 1, basic parameters 2, extended parameters 1, extended parameters 2, OPR basic parameters and OPR extended parameters.
  - Servo parameters (Axis #1 to #4: QD75M, QD75MH and LD77 only)
    Data transferred from the QD75M, QD75MH and LD77 to the servo amplifier.
    <QD75M>
    They include the servo basic parameters, servo reguration parameters and servo extended parameters.
    <QD75MH/LD77>
    They include the servo amplifier series, basic setting parameters, extension setting parameters and I/O setting parameters, extended control parameters, special setting parameters.
  - Positioning data (Axis #1 to #4)
    Data used to set the control data such as positioning control method and addresses.
    Data No. 1 to 600 can be set for each axis.
  - Block start data (Axis #1 to #4)
    Data used to attach a condition to a positioning control start and set the repeat count.
    Note: Equivalent to the start block data of the AD75 positioning module.

Point

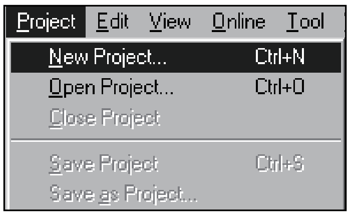
When executing "New Project" or "Save as Project", you cannot use the following characters and symbols in the project path and project name to be specified.

/ , : ; * " < > | \\ COM LPT AUX CON PRN NUL CLOCK$

6.1 Creating a New Project

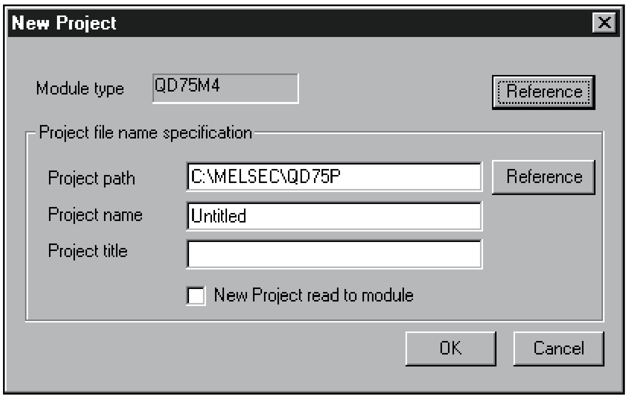
Set the QD75/LD75/LD77 model used to create a new project and the project items.

1) Click the [Project] → [New Project] menu (🗋).



↓

2) Click the "Reference" button of the Module type in the [New Project] dialog box.



Module type QD75M4

Project path C:\MELSEC\QD75P

Project name Untitled

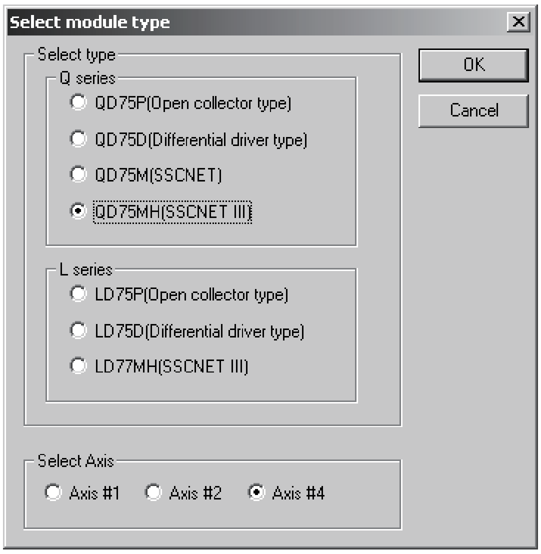
Project title

☐ New Project read to module

↓

3) Choose the Select type and Select Axis radio buttons.

4) Click the "OK" button.



Select type

Q series

○ QD75P(Open collector type)

○ QD75D(Differential driver type)

○ QD75M(SSCNET)

● QD75MH(SSCNET III)

L series

○ LD75P(Open collector type)

○ LD75D(Differential driver type)

○ LD77MH(SSCNET III)

Select Axis

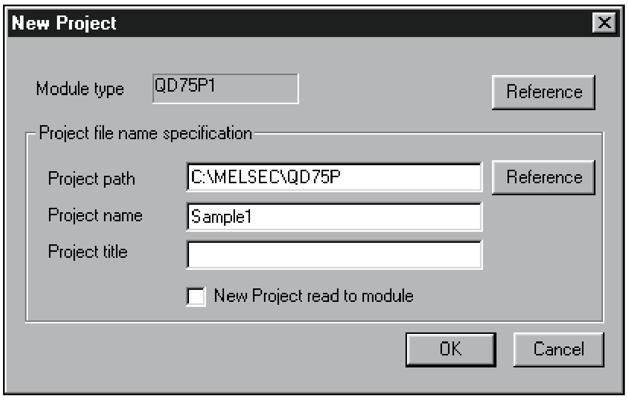
○ Axis #1 ○ Axis #2 ● Axis #4

↓

(To the next page)

(From the preceding page)

↓



Module type: QD75P1

Project path: C:\MELSEC\QD75P

Project name: Sample1

Project title:

5) Set the project save path.
   The project save path defaults to C:\MELSEC\QD75P.
   When changing it, refer to "HELPFUL OPERATION (PART 1)" in this section.

6) Set the project name.
   When specifying the project file name, you can use a total of up to 150 characters to set the project path and project name.
   When setting the project path and project name, the total number of characters should be within 150.
   This screen assumes that the project name is "Sample1".

7) Set the project title as required.

8) Click the "OK" button.
   This creates a new project.

＊1 Example)

Project path: C\MELSEC• • • • QD75\
Project name: Sample01
When setting the following:

$\underbrace{\text{C:\\MELSEC\\ ・・・ QD75P\\Sample01\\Sample01}}_{\text{Within 150 characters}}\text{.Q75}$

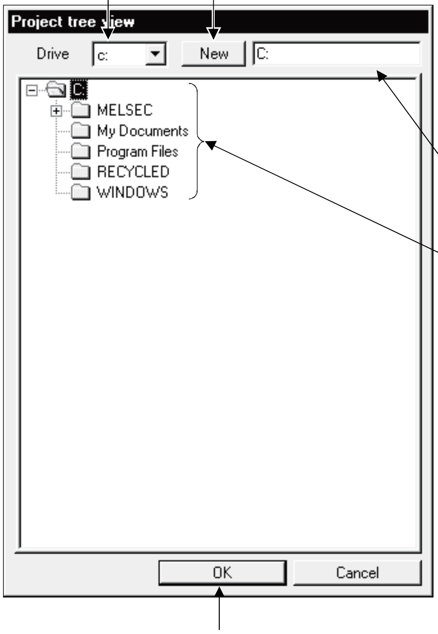
＊2 To utilize the data read from the QD75/LD75/LD77, refer to "HELPFUL OPERATION (PART 2)" in this section.

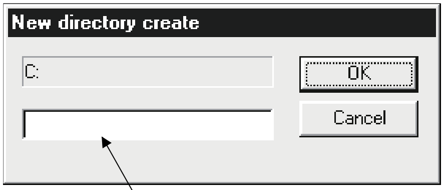
HELPFUL OPERATION (PART 1)

You can perform the operation of changing the project save path while simultaneously checking the project tree view.
In step 5) on the preceding page, click the Project file set "Reference" button.
When the following dialog box appears, choose the project save path from the project tree view or type it from the keyboard.
This operation is also used to perform such operations as "Open Project", "Save Project" and "Delete Project".

1) Choose the drive.

Click the "New" button when creating a new project save path.





Type a new project save path.

2) Choose/type a new project save path.

3) Click.

Point

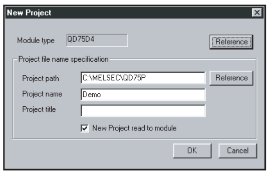
When saving a project, you cannot set "Untitled" in Project name.
Also, do not use "Untitled n (n: 1, 2, 3 .....)" in Project name.
If you read "Untitled 1" and create a new project in default setting, “Untitled2” appears on the Project tree view.

HELPFUL OPERATION (PART 2)

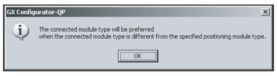
When utilizing the data written to the QD75/LD75/LD77 to create a new project, perform the following operation.

1. Set the Module type, project save path, project name and project title in the New Project dialog box.
2. Click the "New Project read to module" check box.
3. Click the "OK" button.
4. Click the "OK" button in the instruction dialog box.
5. Set the interface, I/O address and others in the Connection setup dialog box (refer to Section 7.1).
6. Click the "OK" button.
7. Set the type and range of the data to be read in the Read from module dialog box (refer to Section 9.1).
8. Click the "OK" button to read the positioning data, block start data and parameters in the specified range from the QD75/LD75/LD77.

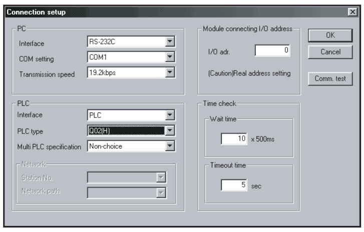
<New module data reading procedure>


New Project
Module type: QD75D4
Project file name specification
Project path: C:\MELSEC\QD75P
Project name: Demo
Project title:
☑ New Project read to module

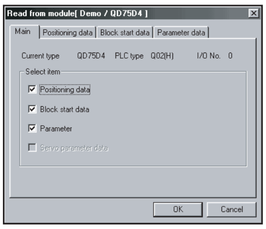
······· New project creation


GX Configurator-QP
The connected module type will be preferred
when the connected module type is different from the specified positioning module type.

······· Instruction is given to indicate which model has precedence.


Connection setup
PC
Interface: RS-232C
COM setting: COM1
Transmission speed: 19.2kbps
Module connecting I/O address
I/O adr.: 0
(Caution)Real address setting
PLC
Interface: PLC
PLC type: Q02(H)
Multi PLC specification: Non-choice
Network
Station No.:
Network path:
Time check
Wait time: 10 x 500ms
Timeout time: 5 sec

···· Connection setup (refer to Section 7.1)


Read from module[Demo / QD75D4]
Current type QD75D4 PLC type Q02(H) I/O No. 0
Select item
☑ Positioning data
☑ Block start data
☑ Parameter
☐ Servo parameter data

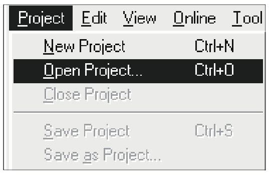
········ Read from module (refer to Section 9.1)

Point

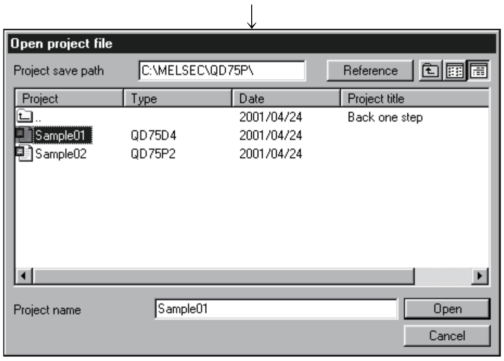
When New Project read to module is performed for new project creation, the QD75/LD75/LD77 connected has precedence if the QD75/LD75/LD77 model of the project differs from the QD75/LD75/LD77 model connected.
After completion of reading, choose the [Project] → [Change module type] menu to change the model. (Refer to Section 11.1.2.)

6.2 Opening the Existing Project

This section explains the operation of opening the saved project.



1) Click the [Project] → [Open Project] menu (📂).



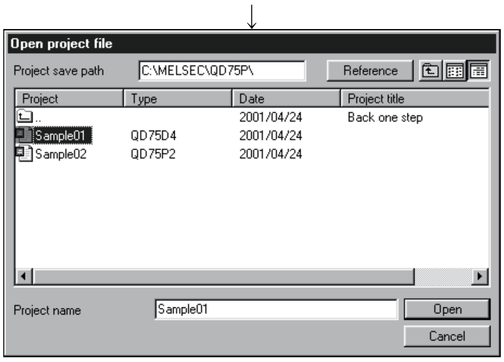
Project save path C:\MELSEC\QD75P\

Project	Type	Date	Project title
..		2001/04/24	Back one step
Sample01	QD75D4	2001/04/24	
Sample02	QD75P2	2001/04/24	

Project name Sample01

2) Click the project name.
   For the setting operation of referring to the project save path, refer to "HELPFUL OPERATION (PART 1)" in Section 6.1.

3) Click the "Open" button.

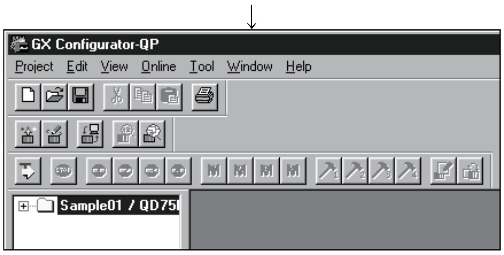


Project save path C:\MELSEC\QD75P\

Project	Type	Date	Project title
..		2001/04/24	Back one step
Sample01	QD75D4	2001/04/24	
Sample02	QD75P2	2001/04/24	

Project name Sample01

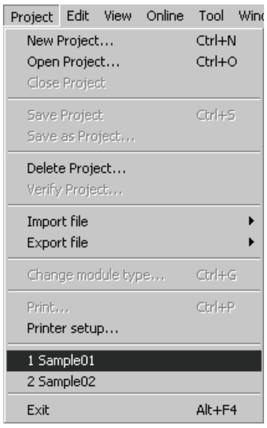
4) The specified project opens.



5) To open multiple projects, repeat the operations in steps 1) to 3).
   The open projects are displayed on the project tree view.

Point

- Projects created with GX Configurator-QP Version 2.33K or later cannot be opened with GX Configurator-QP Version 2.32J or earlier.
  Install GX Configurator-QP of the latest version.
- Recently opened projects (files) can be opened from the project menu
  Up to four projects can be displayed.
  Note that any projects not saved do not remain in the project menu.
  In the initial setting, the [Latest file] menu item appears.



6.3 Saving the Project

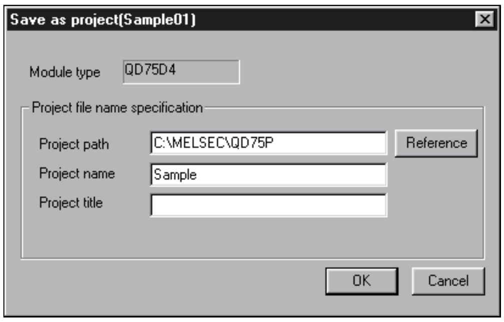
PURPOSE

The project file which is currently edited is saved.

BASIC OPERATION

1. Set the project to be saved as the active project. (Refer to Section 5.2.)
2. To perform save operation, click the [Project]→[Save Project] menu (💾).
   To perform save as operation, click the [Project] → [Save as Project] menu.
   When specifying the project file name, you can use a total of up to 150 characters to set the project path and project name.
   When setting the project path and project name, the total number of characters should be within 150.
   For the operation of setting the project save path and project name, refer to "HELPFUL OPERATION (PART 1)" in Section 6.1.

DISPLAY/SETTING SCREEN



Save as project(Sample01)

Module type: QD75D4

Project file name specification

Project path: C:\MELSEC\QD75P

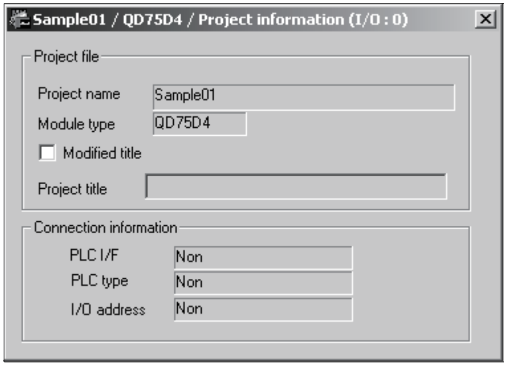
Project name: Sample

Project title:

HELPFUL OPERATION

When you want to change the title in the same project name, perform the following operation.

1. Double-click "Project information" on the Project tree view.
2. Click the unchecked "Modified title " check box in the Project information window and change the current title.
3. Click the [Project] → [Save Project] menu.



Sample01 / QD75D4 / Project information (I/O : 0)

Project file

Project name: Sample01

Module type: QD75D4

☐ Modified title

Project title:

Connection information

PLC I/F: Non

PLC type: Non

I/O address: Non

Point

When saving a project, you cannot set "Untitled" in Project name.
Also, do not use "Untitled n (n: 1, 2, 3 .....)" in Project name. If you read "Untitled 1" and create a new project in default setting, the same project name (Untitled 1) appears on the Project tree view.

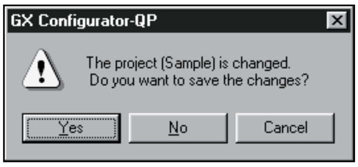
6.4 Closing the Project

PURPOSE

The open project is closed.

BASIC OPERATION

1. Set the project to be closed on the project tree view.
2. Click the [Project] → [Close Project] menu.
3. If any setting has been changed, the dialog box appears to confirm whether the project will be saved or not.
   Click the "Yes" button to save and close the project.
   Click the "No" button to close the project without saving it.



GX Configurator-QP

The project (Sample) is changed.
Do you want to save the changes?

6.5 Deleting the Project

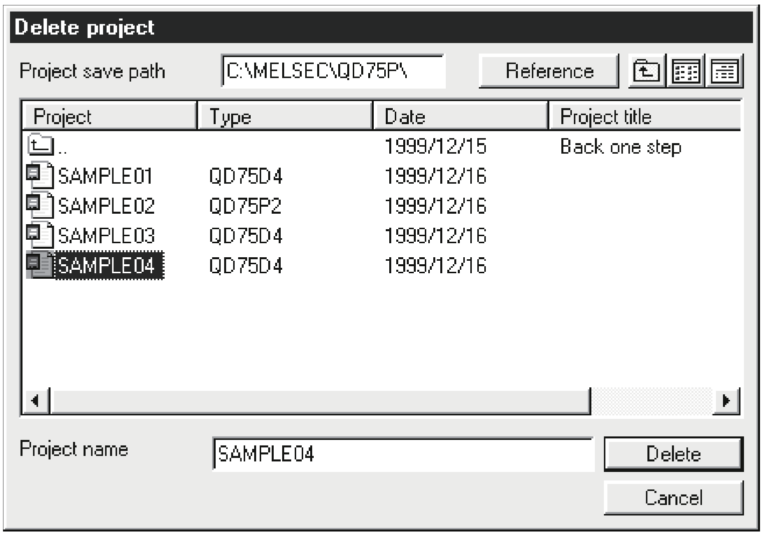
PURPOSE

The project is deleted from HD, FD, etc..

BASIC OPERATION

1. Click the [Project] → [Delete Project] menu.
2. In the Delete project file dialog box, choose the project you want to delete and click the "Delete" button.
   Refer to "HELPFUL OPERATION (PART 1)" in Section 6.1 for the operation of changing the project save path.
3. As the project file deletion confirmation dialog box appears, click the "Yes" button.
4. The project is deleted.

DISPLAY/SETTING SCREEN



Project save path: C:\MELSEC\QD75P\

Project	Type	Date	Project title
..		1999/12/15	Back one step
SAMPLE01	QD75D4	1999/12/16	
SAMPLE02	QD75P2	1999/12/16	
SAMPLE03	QD75D4	1999/12/16	
SAMPLE04	QD75D4	1999/12/16	

Project name: SAMPLE04

6.6 Reading other Format Files

6.6.1 Reading SW1RX/IVD/NX-AD75P / GX Configurator-AP format file

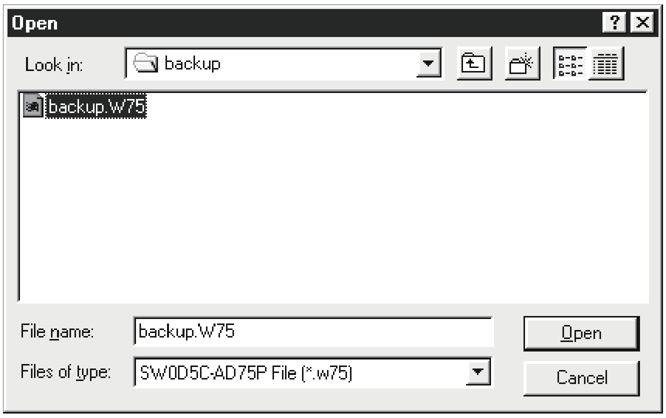
PURPOSE

The positioning data, M code comments, block start data, condition data, parameters, servo parameters are read from the file of the MELSEC-A series software package (SW1□-AD75P, GX Configurator-AP) as a new project of GX Configurator-QP. (Note that they cannot be read to the LD75/LD77 project.)

BASIC OPERATION

1. Click the [Project] → [Import file] → [File reading of SW1RX/IVD/NX-AD75P] / [File reading of SW0D5C-AD75P] menu.
2. Choose the file in the Open dialog box and click the "Open" button.
3. Click the "OK" button in the read destination confirmation dialog box.
4. Set the QD75 model, project save path, project name and project title in the Other file type project dialog box. (Refer to Section 6.1 "HELPFUL OPERATION (PART 1)".)
5. Click the "OK" button.

DISPLAY/SETTING SCREEN



(The screen shows an example of GX Configurator-AP file read.)

DISPLAY/SETTING DATA

Item	Description
Look in	Choose the project save path of the file you will read.
File name	Set the file name you will read.
Files of type	SW1RX/IVD/NX-AD75P File (*.d75) or SW0D5C-AD75P File (*.w75) appears.
"Up One Level" button	Click this button to show the folder one level above the currently displayed folder.
"List" button	Click this button to list files and folders.
"Details" button	Click this button to display the file and folder in detail.
"Open" button	Click this button to read the file.

Point

- Since there are no four-axis type AD75 positioning modules, the positioning data, block start data and parameters of the fourth axis are not read if the QD75 model of the save destination project is of the four axis type.
- Note the following when the file in the GX Configurator-AP or SW1□-AD75P format has been read to GX Configurator-QP.

[AD75P → QD75P/QD75D]

Data Type			Read to GX Configurator-QP
Parameter	Start bias speed		Section is changed from basic parameter 2 to basic parameter 1.
	I/O logic	Over limit	These are new items and therefore not read. Default setting.
		Under limit	
		Drive unit ready	
		Stop signal	
		External signal	
		Zero phase signal	
		Zeroing dog	
		MPG	
		DCC	
		Command PLS signal	Output pulse logic selection to drive unit has been changed to this name.
	Stepping motor mode		These are disused items and therefore read-disabled.
	Manual pulse generator selection		
	ACC/DEC time unit selection		
	Near path control mode selection		This is a disused item and therefore read-disabled. (Because near path control mode is fixed)
	Manual pulse generator input selection		These are new items and therefore read-disabled. Default setting.
	Speed-position function selection		
Positioning data	SLV axis		This is a new item and therefore read-disabled. Default setting.
	Positioning comment		Not read from SW1□-AD75P.
Block start data			Start block data has been changed to this name. Because of reduction in number of blocks, block numbers 5 to 10 are read-disabled. "Stop" in special start is replaced by "Wait start". ∗
Indirect data			This is a disused item and therefore read-disabled.

∗ : After file reading, condition data setting is needed.

[AD75P → QD75M/QD75MH, AD75M → QD75P/QD75D]

Data Type		Read to GX Configurator-QP
Parameter		Default setting since parameter data differ.
Servo parameter		
Positioning data	SLV axis	This is a new item and therefore read-disabled. Default setting.
	Positioning comment	Not read from SW1□-AD75P.
Block start data		Start block data has been changed to this name. Because of reduction in number of blocks, block numbers 5 to 10 are read-disabled. "Stop" in special start is replaced by "Wait start". ∗
Indirect data		This is a disused item and therefore read-disabled.

∗ : After file reading, condition data setting is needed.

Point

[AD75M → QD75M/QD75MH]

Data Type			Read to GX Configurator-QP
Parameter	Start bias speed		Section is changed from basic parameter 2 to basic parameter 1.
	I/O logic	Over limit	These are new items and therefore not read. Default setting.
		Under limit	
		Stop signal	
		External signal	
		Zeroing dog	
		MPG	
	ACC/DEC time unit selection		This is a disused item and therefore read-disabled.
	Near path control mode selection		This is a disused item and therefore read-disabled. (Because near path control mode is fixed)
	External command function selection		External start function selection has been changed to this name.
	Servo Off → On-time permissible restart range setting		Permissible restart range has been changed to this name.
	Manual pulse generator input selection		These are new items and therefore read-disabled. Default setting.
	Speed-position function selection		
Servo parameter ＊1	When servo series is "MR-H-B (MR-H-BN)"		Values of "MR-H-BN" are read.
	When servo series is "MR-J-B" ＊1		Default values of "MR-J2S-B" are read.
	When servo series is "MR-J2-B"		Values of "MR-J2-B" are read. ＊2
	When servo series is "others"		Default values of "MR-J2S-B" are read.
Positioning data	SLV axis		This is a new item and therefore read-disabled. Default setting.
	Positioning comment		Not read from SW1□-AD75P.
Block start data			Start block data has been changed to this name. Because of reduction in number of blocks, block numbers 5 to 10 are read-disabled. "Stop" in special start is replaced by "Wait start". ＊3
Indirect data			This is a disused item and therefore read-disabled.

＊1: Default values are used for the QD75MH, since parameter contents are different.
Make setting according to the used servo.

＊2: The default values of the MR-J2S-B are read since the QD75M is incompatible.
Make setting according to the used servo.

＊3: The MR-J2-B data are read intact. When using them with the MR-J2S-B or MR-J2-Jr, change the servo series to the "MR-J2S-B/MR-J2-Jr". If additions or extension settings have been made in the program, check the data of each setting item.

＊4: After file reading, condition data setting is needed.

6.6.2 Reading the CSV format file

PURPOSE

GX Configurator-QP allows CSV format files created with spreadsheet software, etc. be read as positioning data (axis #1 to #4). (Parameters, servo parameters, and block start data cannot be read.)
The creating method and reading operation of CSV format data are described below.

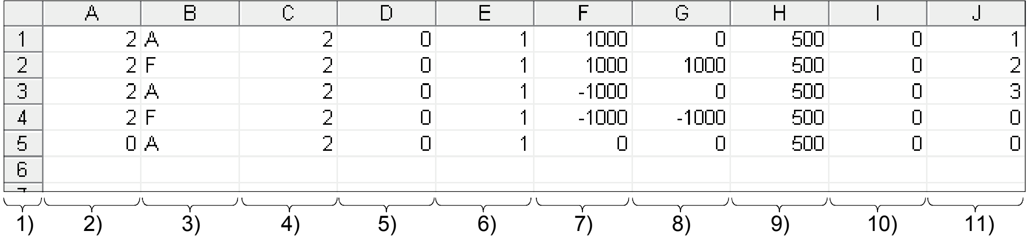
Point

- If all items that make up positioning data have not been entered, CSV format data cannot be read, resulting in an error.
- Since CSV format data is read axis-by-axis, create CSV format data noting which axis (#1/#2/#3/#4) data is being created.

(1) CSV format data creating method

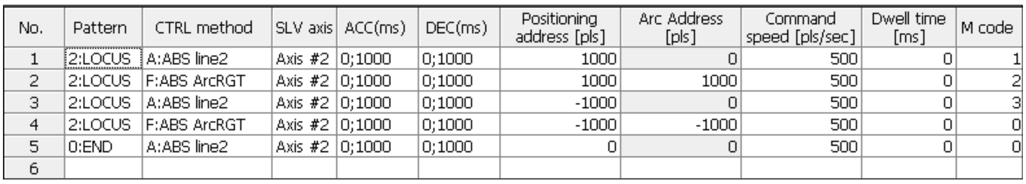
The following sheet indicates the items and values of CSV format data set on a column basis.

<Example of data set to spreadsheet software>



	A	B	C	D	E	F	G	H	I	J
1	2	A	2	0	1	1000	0	500	0	1
2	2	F	2	0	1	1000	1000	500	0	2
3	2	A	2	0	1	-1000	0	500	0	3
4	2	F	2	0	1	-1000	-1000	500	0	0
5	0	A	2	0	1	0	0	500	0	0
6										

<Data set to the above spreadsheet software was read with GX Configurator-QP>



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Address [pls]	Command speed [pls/sec]	Dwell time [ms]	M code
1	2:LOCUS	A:ABS line2	Axis #2	0;1000	0;1000	1000	0	500	0	1
2	2:LOCUS	F:ABS ArcRGT	Axis #2	0;1000	0;1000	1000	1000	500	0	2
3	2:LOCUS	A:ABS line2	Axis #2	0;1000	0;1000	-1000	0	500	0	3
4	2:LOCUS	F:ABS ArcRGT	Axis #2	0;1000	0;1000	-1000	-1000	500	0	0
5	0:END	A:ABS line2	Axis #2	0;1000	0;1000	0	0	500	0	0
6										

Number	Setting	Remarks
1)	Set the positioning control pattern in column 1 from left. Set any value from 0 to 2.	Refer to Section 8.3 for details of data corresponding to alphanumeric values to be set.
2)	Set the operation method in column 2 from left. Set it with 1 to 9 and A to Z.	
3)	Set the interpolation axis for two-axis interpolation control in column 3 from left.	
4)	Set the host axis for single-axis or three-/four-axis interpolation control.	
5)	Set the accel time No. in column 4 from left. Set it from 0 to 3.	
6)	Set the decel time No. in column 5 from left. Set it from 0 to 3.	
7)	Set the address in column 6 from left.	
8)	Set the circular positioning address in column 7 from left.	
9)	Set the command speed in column 8 from left.	
10)	Set the dwell time in column 9 from left.	
11)	Set the M code in column 10 from left.	

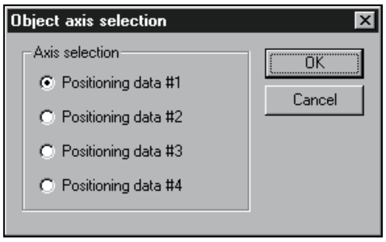
(2) CSV format file reading operation

BASIC OPERATION

1. On the project tree view ,set the active project whose CSV format file will be read. (Refer to Section 5.2.)
2. Click the [Project] → [Import file] → [File reading of CSV form positioning data] menu.
3. Click the "Yes" button in the dialog box which confirms that the read CSV format data will replace the present positioning data.
4. Choose the axis in the Object axis selection dialog box and click the "OK" button.
5. Choose the file and file type in the Open dialog box and click the "Open" button.
6. Click the "OK" button in the read confirmation dialog box.

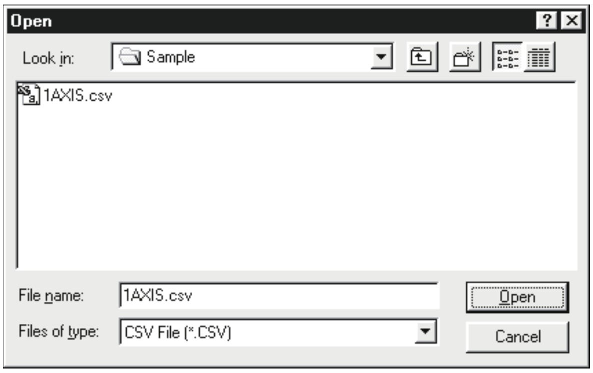
DISPLAY/SETTING SCREEN

[Object axis selection dialog box]



● Positioning data #1
○ Positioning data #2
○ Positioning data #3
○ Positioning data #4

[Open dialog box]



Look in: Sample

File name: 1AXIS.csv

Files of type: CSV File (*.CSV)

DISPLAY/SETTING DATA

Item	Description
Object axis selection dialog box	Choose the axis whose positioning data will be read in the CSV format.
Look in	Choose the project save path of the file you will read.
File name	Set the file name to be read to the project.
Files of type	CSV File (*.CSV) appears.
"Up One Level" button	Click this button to show the folder one level above the currently displayed folder.
"List" button	Click this button to list files and folders.
"Details" button	Click this button to display the file and folder in detail.
"Open" button	Click this button to read the file.

6.7 Write to CSV Format File

PURPOSE

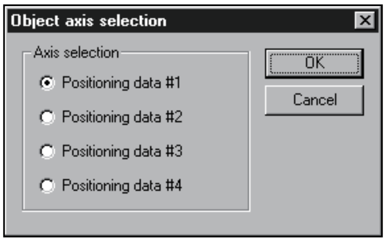
The positioning data set in the project of GX Configurator-QP is saved in the CSV format file.
Refer to Section 6.6.2 (1) for the positioning data setting items and CSV format data.

BASIC OPERATION

1. On the project tree view , set as the active project the project whose positioning data will be saved in the CSV format file. (Refer to Section 5.2.)
2. Click the [Project] → [Export file] → [File writing of CSV form positioning data] menu.
3. Choose the axis in the Object axis selection dialog box and click the "OK" button.
4. Set the save location and file name in the Save As dialog box and click the "Save" button.
5. Click the "OK" button in the write confirmation dialog box.

DISPLAY/SETTING SCREEN

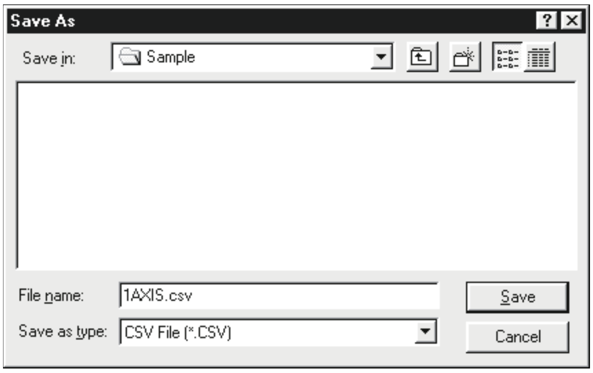
[Object axis selection dialog box]



Object axis selection

Axis selection
- ● Positioning data #1
- ○ Positioning data #2
- ○ Positioning data #3
- ○ Positioning data #4

[Save As dialog box]



Save As

Save in: Sample

File name: 1AXIS.csv

Save as type: CSV File (*.CSV)

DISPLAY/SETTING DATA

Item	Description
Object axis selection dialog box	Choose the axis whose positioning data will be saved in the CSV format.
Save in	Choose the drive or folder where the data will be saved.
File name	Set the file name to be saved in the other format file.
Files of type	CSV File (*.CSV) appears.
"Up One Level" button	Click this button to show the folder one level above the currently displayed folder.
"Create New Folder" button	Click this button to create a "new folder".
"List" button	Click this button to list files and folders.
"Details" button	Click this button to display the file and folder in detail.
"Save" button	Click this button to save the other format file.

7. SYSTEM CHECKING FROM PERIPHERAL DEVICE

Specify the QD75/LD75/LD77 to be accessed per project, also check connections with the external equipment (servo amplifiers, servo motors, etc.), and conduct initial operation tests of the servo motors.

7.1 Connection Setup

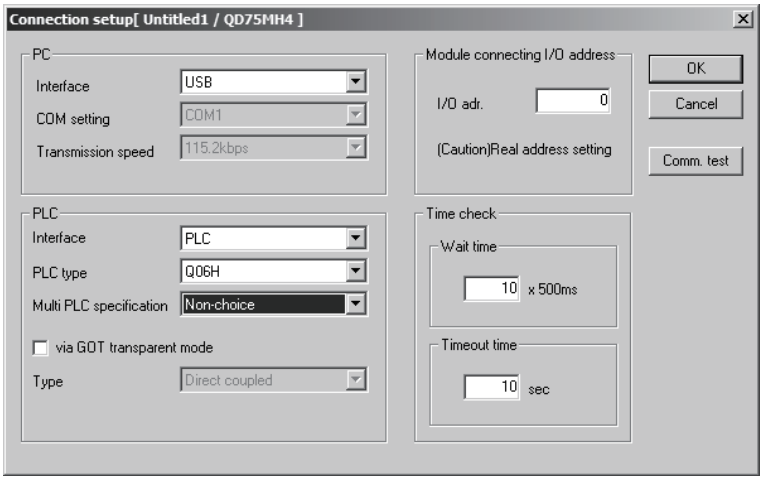
PURPOSE

Choose an the interface connected to the QCPU, LCPU, serial communication module, or Q corresponding MELSECNET/H network remote I/O module, and set the I/O address of the QD75/LD75/LD77 to be accessed.

BASIC OPERATION

1. Click the [Online] → [Connection setup] menu.
2. Choose the interface in the Connection setup dialog box and set the I/O address, etc.
3. After the setting is completed, click the "OK" button.

DISPLAY/SETTING SCREEN



Connection setup[Untitled1 / QD75MH4]

PC
Interface: USB
COM setting: COM1
Transmission speed: 115.2kbps

Module connecting I/O address
I/O adr.: 0
(Caution)Real address setting

PLC
Interface: PLC
PLC type: Q06H
Multi PLC specification: Non-choice
☐ via GOT transparent mode
Type: Direct coupled

Time check
Wait time: 10 x 500ms
Timeout time: 10 sec

DISPLAY/SETTING DATA

Item		Description
PC	Interface	Choose the type of the personal computer side interface. [For QD75 projects] "RS-232C", "USB", "Ethernet direct", or "Q series bus" can be selected. When using a PC CPU module, select "Q series bus". When "Ladder logic test" is selected for the programmable controller side interface, the personal computer side interface cannot be selected. [For LD75/LD77 projects] "RS-232C", "USB", or "Ethernet direct" can be selected. When "RS-232C" is selected for the personal computer side interface, "PLC" is selected for the programmable controller side interface, and the personal computer is directly connected to the LCPU using RS-232 cable, an RS-232 adapter (optional item) is required. When "via GOT transparent mode" is selected for the programmable controller side interface, "RS-232C" or "USB" can be set for the personal computer side interface. Since settable items depend on the selection status of "via GOT transparent mode", if the item is selected, reconfigure the settings. When "Serial communication" is selected for the programmable controller side interface and "via GOT transparent mode" is not selected, the personal computer side interface is fixed to "RS-232C".
	COM setting	Choose a COM port when the personal computer side interface is “RS-232C”. The selection range is "COM1" to "COM10".
	Transmission speed	Choose a transmission speed when the personal computer side interface is “RS-232C”. The selection range is "9.6kbps" to "115.2kbps".
PLC	Interface	Choose the type of the programmable controller to be connected. [For QD75 projects] "PLC", "Serial communication" or, "Ladder logic test" can be selected. When connecting via Q corresponding serial communication module, select "Serial communication". When connecting to GX Simulator, select "Ladder logic test". (Start GX Simulator from GX Developer beforehand.) When "Q series bus" is set for the personal computer side interface, the PLC side interface is fixed to "PLC". [For LD75/LD77 projects] "PLC" or "Serial communication" can be selected. When connecting via L corresponding serial communication module, select "Serial communication".
	PLC type	Select the model of the control CPU of the positioning module to communicate with or "Remote I/O".
	Multi PLC specification	Select the CPU No. of the control CPU of the positioning module to communicate with in a multiple CPU system configuration. [For QD75 projects] "Non-choice", "PLC No.1", "PLC No.2", "PLC No.3", or "PLC No.4" can be selected. For a single CPU system configuration, select "Non-choice" or "PLC No. 1". [For LD75/LD77 projects] Since the projects are not supported in the multiple CPU system configuration, this item is fixed to "Non-choice".
	via GOT transparent mode	Select this item when connecting GX Configurator-QP to the programmable controller via GOT1000 series. This item can be selected when "RS-232C" or "USB" is chosen in the personal computer side interface, and "PLC" or "Serial communication" is chosen in the programmable controller side interface. When choosing "via GOT transparent mode", select a CPU module that supports the GOT transparent mode (other than "Remote I/O" and "Q12DCCPU-V").

Item		Description
PLC	Type	Select a connection type between GOT1000 series and the programmable controller when using the GOT transparent mode. [For QD75 projects] This item can be set when "via GOT transparent mode" is selected. "Direct coupled" or "Bus" can be selected. When "Serial communication" is set for programmable controller side interface, the connection type between GOT1000 series and serial communication module is fixed to "Direct coupled". [For LD75/LD77 projects] The connection type between GOT1000 series and the programmable controller is fixed to "Direct coupled".
I/O adr.		Set the I/O address (start I/O number) of the positioning module to be accessed in hexadecimal.
Wait time		Set the time-out period until when the positioning module accepts a request from GX Configurator-QP. When time-out occurs, the operating axes all stop.
Timeout time		Set the suspension time of communication judged as a communication error.
Comm. test		Whether the access target CPU module set in the Connection Setup dialog box can be communicated normally to the positioning module or not is tested. When normal communication can be made, the types of the positioning module and CPU module are displayed.

Point

- If you set the personal computer interfaces to the same COM port in GX Configurator-QP and GX Developer, set the baudrate to the same speed.
  If they are started at the same time, the baudrate set first has priority and the baudrate set later is ignored.
- If GX Configurator-QP is forced to end in the test mode, a time-out occurs due to the elapse of the wait time and the QD75/LD75/LD77 cancels the test mode.
- A communications error may occur if communications are made with the QCPU/LCPU after setting of any of the resume function, suspend setting, power-saving function and standby mode of the peripheral device. For this reason, do not set the above functions when communicating with the QD75/LD75/LD77.
- If the USB cable is disconnected/connected, the QCPU/LCPU is reset, or power is switched on/off frequently during communications with the QCPU/LCPU, a communications error may occur and the system may not recover from the error. Hence, place the system offline when disconnecting/connecting the USB cable, resetting the QCPU/LCPU, or switching power on/off.
  If the system does not recover from the communications error, completely disconnect the USB cable once and reconnect it after more than 5 seconds has elapsed. (An error may occur at the initial communications after this operation, but the system will function properly from the second time onwards.)
- A communication error may occur depending on the combination of the personal computer model, USB cable and so on.
  In that case, refer to the message displayed and perform operation again.
- If the baudrate is changed at the serial port of the personal computer (personal computer interface) to perform fast communication, communications may not be made or a communications delay may occur due to a communications retry depending on the performance of the personal computer.
  If communications cannot be made for fast communication, reduce the baudrate and restart communication.
- If "Multiple PLC specification" is set for the "PLC No. 2", "PLC No. 3" or "PLC No. 4" in the PLC side setting, that setting is made valid only when the QD75 of function version "B" or later is used. To confirm the function version of the QD75, refer to "Section 7.3 Checking the Positioning Module Function Version (OS Information) ".

REMARK

When the programmable controller interface is "Serial communication" (Serial communication module), the serial communication module switches must be set on the PLC parameter I/O assignment setting screen of GX Developer.
Refer to GX Developer Operating Manual, for the way to make settings in the I/O assignment setting screen.
For details more information on the switch settings, refer to user's manual of the serial communication module used.
Switch setting examples are listed below.

Item	Description		Setting
Switch 1	CH1 communication speed	CH1 transmission setting	0726H
Switch 2	-	CH1 communications protocol	0008H
Switch 3	CH2 communication speed	CH2 transmission setting	0727H
Switch 4	-	CH2 communications protocol	0000H
Switch 5	Module station number		0000H

Detailed description of settings

Item	Setting
Operation setting	Independent setting
Data bit setting	8
Parity bit yes/no setting	Yes
Odd/even parity bit	Odd
Stop bit setting	1
Sum check yes/no setting	Yes
Online change enable/disable setting	Enable
Setting change enable/disable setting	Disable
Transmission speed setting	19200bps
Communications protocol	• For Q corresponding serial communication module: Connecting GX Developer • For L corresponding serial communication module: MELSOFT Connection

7.1.1 Setting for connection via GOT (GOT transparent mode)

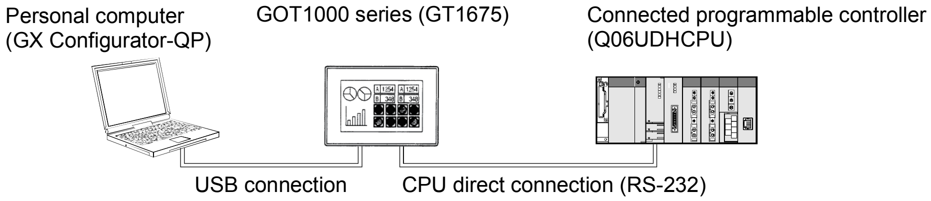
PURPOSE

This section explains how to set GX Configurator-QP connected to the QCPU/LCPU or serial communication module by the GOT transparent mode. For cables connected to GOT, settings and precautions for GOT, refer to the GOT1000 Series Connection Manual (Mitsubishi Products).

BASIC OPERATION

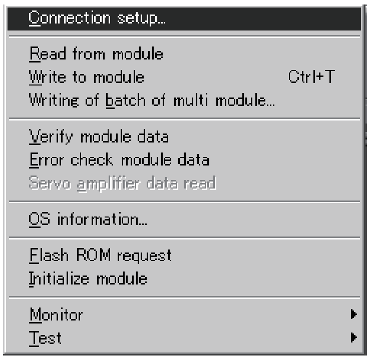
(1) System configuration example

The following system configuration example shows the setting method.
For system configuration in which the GOT transparent mode can be used, refer to Section 2.1.



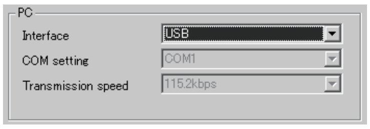
(2) Setting method

After connecting GOT and the personal computer, and GOT and the programmable controller, set the GOT transparent mode in the [Connection setup] screen by the following procedure.



1) Choose [Online] → [Connection setup].

↓



Interface: USB
COM setting: COM1
Transmission speed: 115.2kbps

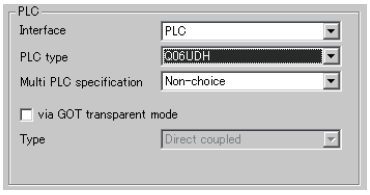
2) Choose "USB" in "Interface" of "PC".

↓

(To the next page)

(From the previous page)

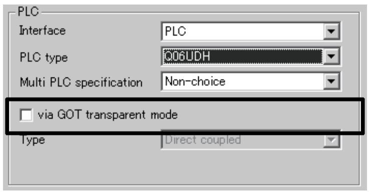
↓



PLC
Interface: PLC
PLC type: Q06UDH
Multi PLC specification: Non-choice
☐ via GOT transparent mode
Type: Direct coupled

3) Choose "PLC" in "Interface" of "PLC" and "Q06UDH" in "PLC type".
(When connecting to a serial communication module, choose "Serial communication" in "Interface" of "PLC".)

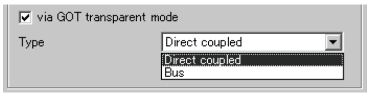
↓



PLC
Interface: PLC
PLC type: Q06UDH
Multi PLC specification: Non-choice
☐ via GOT transparent mode
Type: Direct coupled

4) Select "via GOT transparent mode".
(The setting of "Interface" of "PC" may be changed by the "Interface" setting of "PLC". In this case, set "Interface" of "PC" again.)

↓



☑ via GOT transparent mode
Type: Direct coupled

5) Choose "Direct coupled" in "Type".
(Choose "Bus" in "Type" when connecting the QCPU and GOT in bus connection. When connecting to the LCPU or a serial communication module, "Type" is fixed to "Direct coupled".)

7.2 System Monitor

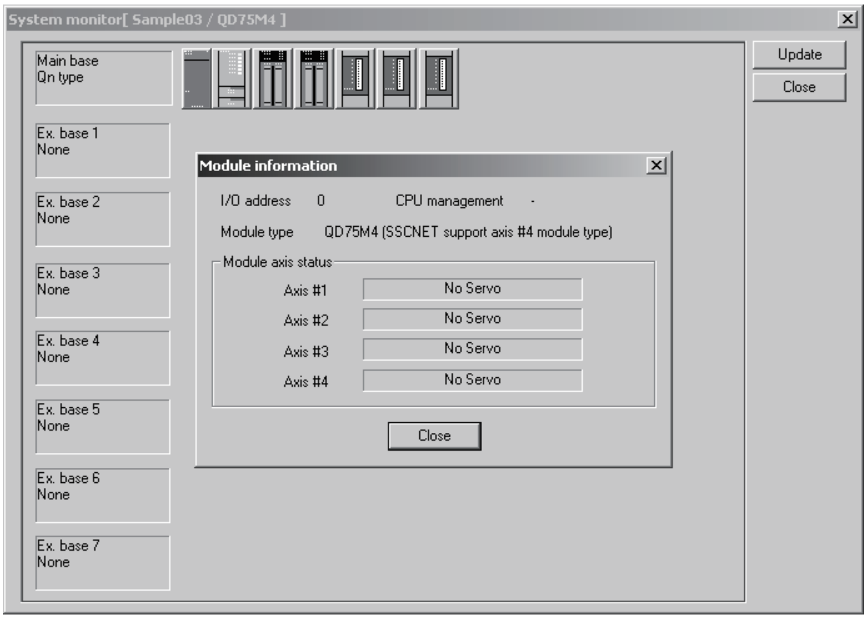
PURPOSE

Check the module configuration, I/O address, Module type and Module axis status of the station (system) connected.
(Note that this function is not available for LD75/LD77 projects.)

BASIC OPERATION

1. Set the connection target. (Refer to Section 7.1.)
2. Click the [Tool] → [System monitor] menu.
3. The QD75 on the connected station appears in the System monitor dialog box.
4. Click the QD75 illustration and check the I/O address, CPU management, Module type and Module axis status.
5. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN


System monitor[Sample03 / QD75M4]

Main base Qn type

Ex. base 1 None

Ex. base 2 None

Ex. base 3 None

Ex. base 4 None

Ex. base 5 None

Ex. base 6 None

Ex. base 7 None

Module information

I/O address 0   CPU management -

Module type QD75M4 (SSCNET support axis #4 module type)

Module axis status

Axis #1 No Servo

Axis #2 No Servo

Axis #3 No Servo

Axis #4 No Servo

DISPLAY/SETTING DATA

Item	Description
System monitor	Shows the connection target programmable controller system. Clicking the QD75 illustration shows the module information.
Module information	Shows the I/O address, CPU management, module type and module axis statuses.
"Update" button	Click this button to show the latest system information.

7.3 Checking the Positioning Module Function Version (OS Information)

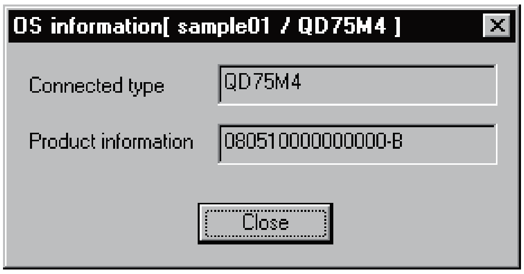
PURPOSE

Depending on the function version of the positioning module, this software may not be compatible with some functions. (Refer to Appendix 2.)
Before setting various data, check the function version (product information) of the positioning module with the setting software.

BASIC OPERATION

1. Specify the connection target. (Refer to Section 7.1.)
2. Click the [Online] → [OS information] menu.
3. Check the function version in the OS information dialog box.
4. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN



Connected type: QD75M4
Product information: 080510000000000-B

DISPLAY/SETTING DATA

Item	Description
Connected type	Indicates the model of the connected QD75/LD75/LD77.
Product information	Indicates the function version of the connected QD75/LD75/LD77. The function version "B" is displayed on the above display/setting screen.

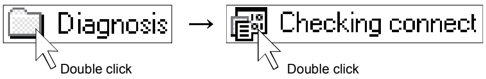
7.4 Checking Connect

PURPOSE

Make sure that the cables between the QD75P/QD75D/LD75 and servo amplifiers or external devices, and between servo motors and servo amplifiers are connected properly.
(Note that this function is not available for the QD75M/QD75MH/LD77.)

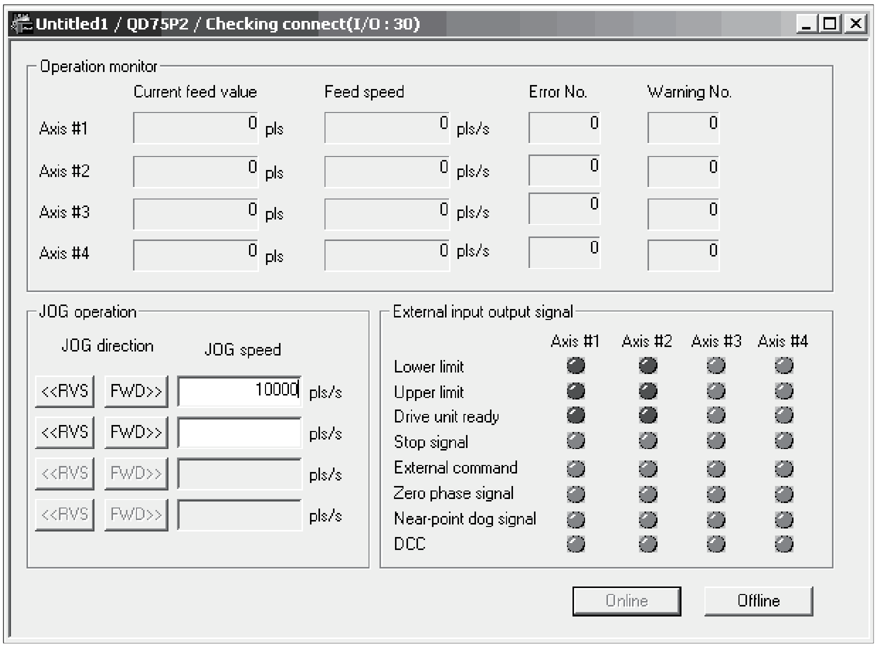
BASIC OPERATION

1. Power on the positioning control system and STOP the programmable controller CPU.
2. Set the connection target. (Refer to Section 7.1.)
3. Choose Checking connect.



4. Click the "Online" button in the Checking connect window.
5. The online processing (test mode shift) confirmation dialog box appears.
   Click the "Initialize" button to check connection after initializing the QD75/LD75.
   Click "OK" to check connection without initializing the QD75/LD75.
6. Make sure that the external I/O signals are in the following states.
   Drive unit ready, Upper limit, Lower limit: ON (red)
   Stop signal: OFF (gray)
   If any of the above states is not established, refer to "HELPFUL OPERATION (1)" and "HELPFUL CORRECTIVE ACTIONS" in this section.
7. Check whether the following signals from the external devices are ON or OFF.
   Stop signal, External command.
8. Set the JOG speed.
9. Press the "FWD" or "REV" button to start JOG operation.
   Hold down the button to continue JOG operation.
10. Perform JOG operation and check the operation, rotation direction and feed speed of the servo motor.
11. Perform JOG operation and check whether Zero phase and DOG signals turn on or off.
12. Perform JOG operation and check whether the upper and lower limit switches turn on or off.
    Refer to "HELPFUL OPERATION (2)" in this section for the way to restore an axis stop due to OFF of the upper/lower limit switch.
13. When an error has occurred, check the error code definition with the help function (refer to Section 11.10), then click [Online] → [Test] → [Error reset] → [Error reset #1 to #4] menu (① to ④).
14. To exit, click the "Offline" button, and click the "OK" button in the test mode end confirmation dialog box.

DISPLAY/SETTING SCREEN



Untitled1 / QD75P2 / Checking connect(I/O : 30)

Operation monitor

	Current feed value	Feed speed	Error No.	Warning No.
Axis #1	0 pls	0 pls/s	0	0
Axis #2	0 pls	0 pls/s	0	0
Axis #3	0 pls	0 pls/s	0	0
Axis #4	0 pls	0 pls/s	0	0

JOG operation

JOG speed: 10000 pls/s

DISPLAY/SETTING DATA

Item	Description
Operation monitor	Indicates the current feed value, feed speed, error No. and warning No. of each axis.
JOG speed	Set the speed for JOG operation.
JOG direction	Press the "FWD" or "RVS" button of the axis for JOG operation to start JOG operation.
External input output signal	Indicates the external I/O signal states (ON: Red, OFF: Gray) of the QD75/LD75.
"Offline" button	Click this button to end the QD75/LD75 test mode and end Checking connect.
"Online" button	Click this button to start the QD75/LD75 test mode and execute Checking connect.

HELPFUL OPERATION (1)

Perform the following operation if the I/O logic states of the drive unit ready, upper/lower limit switch and stop signal are different from the initial settings (negative logic).

1. In the extended parameters, set the logic signals in which the following states are established during normal operation. (Refer to Section 8.1.)
   Drive unit ready, upper limit, lower limit: ON
   Stop signal: OFF
2. Write the parameters to the QD75/LD75. (Refer to Section 9.1.)
3. Perform steps 1 to 5 in the basic operation of this section.
4. Click the "No" button in the Move online dialog box.
5. The operation steps to be performed hereafter are the same as steps 7 to 14 in the basic operation of this section.

HELPFUL OPERATION (2)

Perform the following operation to restart the axis which was brought to an alarm stop as the upper/lower limit switch had turned OFF during JOG operation.

1. Click [Online] → [Test] → [Error reset] → [Error reset #1 to #4] menu (1 to 4).
2. Perform JOG operation to move the axis to within the upper or lower limit range.

HELPFUL CORRECTIVE ACTIONS

Take the following corrective actions when Checking connect cannot be completed properly.

Status	Corrective Action
Checking connect cannot start	Check the connection of cables with the QD75/LD75.
	In Connection setup, check whether the interface, PLC type and other settings are correct. (Refer to Section 7.1.)
Drive unit ready signal is OFF	Check that the servo amplifier is powered on.
	Check the connection of the external I/O signal connector.
	Change the extended parameter I/O logic.
Upper/lower limit signal is OFF	Check the connection of the external I/O signal connector.
	Check for contact of the upper/lower limit switch.
	Change the extended parameter I/O logic.
Stop signal is ON	Check the connection of the external I/O signal connector.
	Check the status of the stop switch.
	Change the extended parameter I/O logic.
JOG operation cannot be performed.	Check that JOG speed setting is not "0".
Error/warning occurred	Check the error/warning code using the help function, and remove the cause.

8. DATA SETTING

Set the parameters, servo parameters, positioning data and block start data to be written to the QD75/LD75/LD77, and check the setting ranges and matching of the data using the simulation or error check function.
Write the preset parameters, servo parameters, positioning data and block start data to the QD75/LD75/LD77 before starting positioning operation.
Refer to Section 9.1 for the operation to write the data to the QD75/LD75/LD77.

8.1 Parameter Setting

Set the parameters necessary to exercise positioning control.
For parameter settings, refer to the user's manual for the positioning module used.

PURPOSE

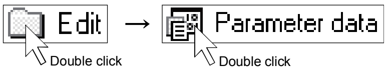
There are the following four parameter types.

- Basic parameters
- Extended parameters
- OPR basic parameters
- OPR extended parameters

The basic and extended parameters are divided into parameters 1 needed for system start and parameters 2 optimized according to the connected external devices and control.

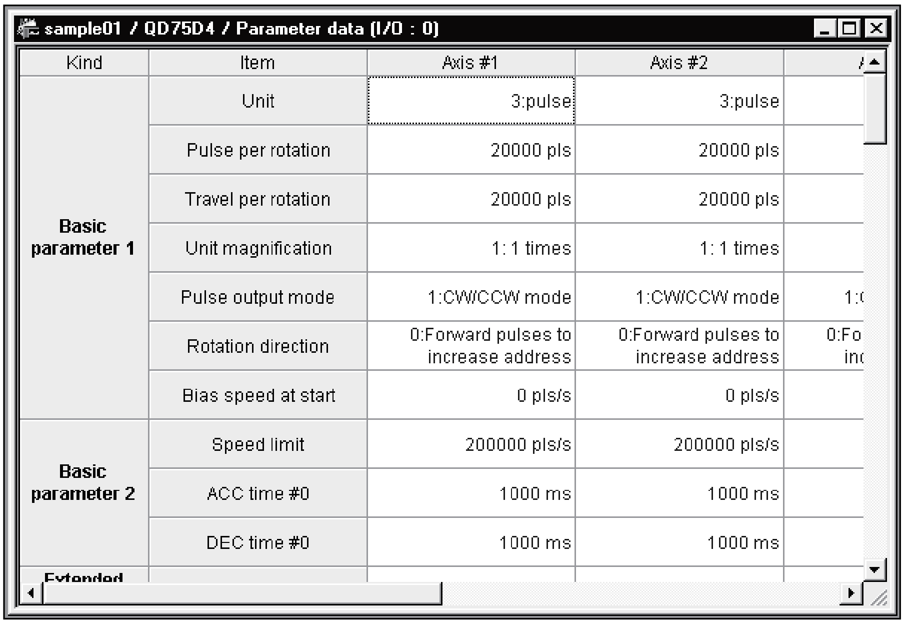
BASIC OPERATION

1. Choose Parameter.



2. Make setting in the parameter edit window.

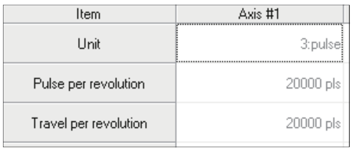
DISPLAY/SETTING SCREEN



sample01 / QD75D4 / Parameter data (I/O : 0)

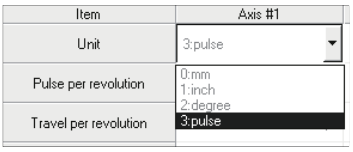
Kind	Item	Axis #1	Axis #2
Basic parameter 1	Unit	3:pulse	3:pulse
	Pulse per rotation	20000 pls	20000 pls
	Travel per rotation	20000 pls	20000 pls
	Unit magnification	1: 1 times	1: 1 times
	Pulse output mode	1:CW/CCW mode	1:CW/CCW mode
	Rotation direction	0:Forward pulses to increase address	0:Forward pulses to increase address
	Bias speed at start	0 pls/s	0 pls/s
Basic parameter 2	Speed limit	200000 pls/s	200000 pls/s
	ACC time #0	1000 ms	1000 ms
	DEC time #0	1000 ms	1000 ms
Extended			

Double-click the cell and make setting in the text box or list box.
In the text box, you can set the maximum value/minimum value/default value with the right-click menu.
Right-click a cell and select "Calculate electric gear" to display the calculation result of movement amount per pulse used for electric gear function.
For the electric gear function and movement amount per pulse, refer to the user's manual for the positioning module used.
When performing operation from the keyboard, enter the value and press the "Enter" key to determine the value.
In the list box which shows the set value and set data (example 3:pulse), pressing the "space" key displays a list.
Make selection with the "↑" or "↓" key, and press the "Enter" key to determine the value.



Item	Axis #1
Unit	3:pulse
Pulse per revolution	20000 pls
Travel per revolution	20000 pls

→ "Space" key →



Item	Axis #1
Unit	3:pulse
Pulse per revolution	
Travel per revolution	

Point

- In the parameter edit window, the indications have the following meanings.
  Blue characters : Default (initial value) setting
  Black characters : Setting other than default (no error)
  Red : Setting range error
- Since changing the unit setting changes the setting range, any setting other than the default (black characters) may result in a setting range error.
  After changing the unit setting, execute an error check to confirm the setting.
- "Speed-position function selection" in "Extended parameter 1" can be set when the QD75 of function version "B" or later, LD75, or LD77 is used.
  To confirm the function version of the QD75/LD75/LD77, refer to "Section 7.3 Checking the Positioning Module Function Version (OS Information)".

8.2 Servo Parameter Setting

PURPOSE

Set the servo parameters to be transferred from the QD75M, QD75MH and LD77 to the servo amplifiers via the SSCNET (Servo System Controller NETwork) or SSCNETⅢ.

For servo parameters, the following four types are available.

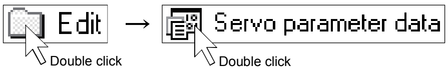
<QD75M>
- Servo basic parameters
- Servo regulation parameters
- Servo extended parameters
- Servo extended parameters 2

<QD75MH/LD77>
- Servo amplifier series
- Basic setting parameters
- Gain/filter parameters
- Extension setting parameters
- I/O setting parameters
- Extended control parameters
- Special setting parameters

For settings, refer to the instruction manuals of the servo amplifiers and servo motors used.

BASIC OPERATION

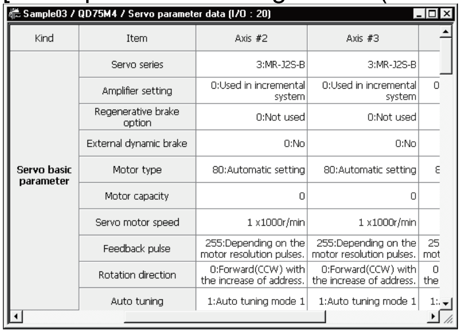
1. Choose Servo Parameter.



2. Make setting in the parameter edit window.

DISPLAY/SETTING SCREEN

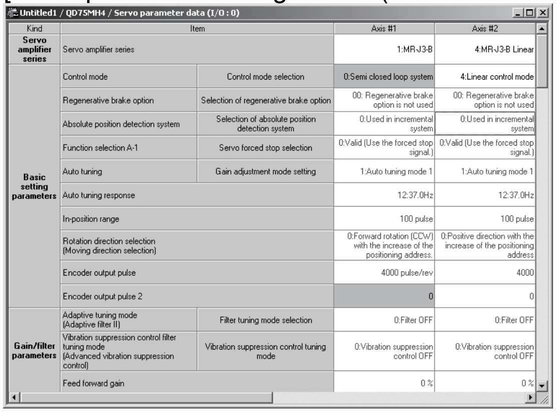
[Servo parameter setting screen (QD75M)]



Sample03 / QD75M4 / Servo parameter data (I/O : 20)

Kind	Item	Axis #2	Axis #3
Servo basic parameter	Servo series	3:MR-J2S-B	3:MR-J2S-B
	Amplifier setting	0:Used in incremental system	0:Used in incremental system
	Regenerative brake option	0:Not used	0:Not used
	External dynamic brake	0:No	0:No
	Motor type	80:Automatic setting	80:Automatic setting
	Motor capacity	0	0
	Servo motor speed	1 x1000r/min	1 x1000r/min
	Feedback pulse	255:Depending on the motor resolution pulses.	255:Depending on the motor resolution pulses.
	Rotation direction	0:Forward(CCW) with the increase of address.	0:Forward(CCW) with the increase of address.
	Auto tuning	1:Auto tuning mode 1	1:Auto tuning mode 1

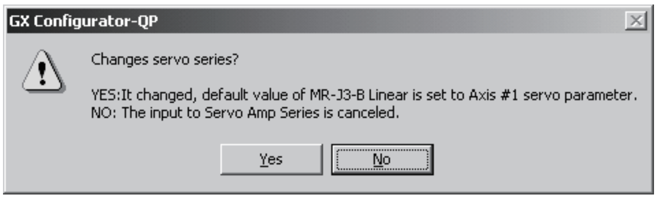
[Servo parameter setting screen (QD75MH/LD77)]



Untitled1 / QD75MH4 / Servo parameter data (I/O : 0)

Kind	Item		Axis #1	Axis #2
Servo amplifier series	Servo amplifier series		1:MR-J3-B	4:MR-J3-B Linear
Basic setting parameters	Control mode	Control mode selection	0:Semi closed loop system	4:Linear control mode
	Regenerative brake option	Selection of regenerative brake option	00: Regenerative brake option is not used	00: Regenerative brake option is not used
	Absolute position detection system	Selection of absolute position detection system	0:Used in incremental system	0:Used in incremental system
	Function selection A-1	Servo forced stop selection	0:Valid (Use the forced stop signal.)	0:Valid (Use the forced stop signal.)
	Auto tuning	Gain adjustment mode setting	1:Auto tuning mode 1	1:Auto tuning mode 1
	Auto tuning response		12:37.0Hz	12:37.0Hz
	In-position range		100 pulse	100 pulse
	Rotation direction selection (Moving direction selection)		0:Forward rotation (CCW) with the increase of the positioning address.	0:Positive direction with the increase of the positioning address
	Encoder output pulse		4000 pulse/rev	4000
	Encoder output pulse 2		0	0
Gain/filter parameters	Adaptive tuning mode (Adaptive filter II)	Filter tuning mode selection	0:Filter OFF	0:Filter OFF
	Vibration suppression control filter tuning mode (Advanced vibration suppression control)	Vibration suppression control tuning mode	0:Vibration suppression control OFF	0:Vibration suppression control OFF
	Feed forward gain		0 %	0 %

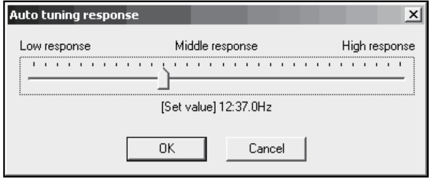
Double-click the cell and make setting in the text box or list box.
Right-click on each text box and select the maximum, minimum, or default value from the pop-up menu. (When one servo amplifier is selected for QD75MH/LD77, the applicable default setting values are automatically determined.)
When one servo amplifier series is selected, a warning message appears on the screen. If the "Yes" button is selected, the applicable default setting values for each servo amplifier series can be determined automatically. If the "No" button is selected, the change of the servo amplifier series is cancelled.



Changes servo series?

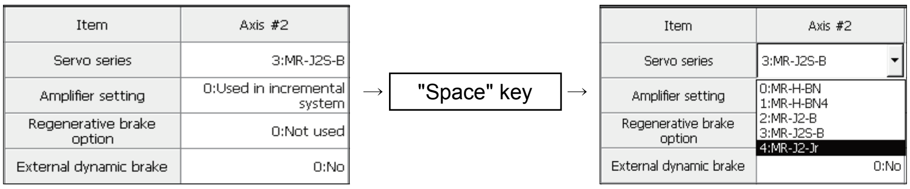
YES:It changed, default value of MR-J3-B Linear is set to Axis #1 servo parameter.
NO: The input to Servo Amp Series is canceled.

Set "Auto tuning response" of QD75MH/LD77 by moving the slider from the auto tuning response dialog box.



[Set value] 12:37.0Hz

When performing operation from the keyboard, enter the value and press the "Enter" key to determine the value.
In the list box which shows the set value and set data (example 3:pulse), pressing the "space" key displays a list.
Make selection with the "↑" or "↓" key, and press the "Enter" key to determine the value.



Item	Axis #2
Servo series	3:MR-J2S-B
Amplifier setting	0:Used in incremental system
Regenerative brake option	0:Not used
External dynamic brake	0:No

Item	Axis #2
Servo series	3:MR-J2S-B
Amplifier setting	0:MR-H-BN 1:MR-H-BN4 2:MR-J2-B 3:MR-J2S-B 4:MR-J2-Jr
Regenerative brake option	
External dynamic brake	0:No

Point

- In the parameter edit window, the indications have the following meanings.
  Blue characters : Default (initial value) setting
  Black characters : Setting other than default (no error)
  Red : Setting range error
  The default (initial) values set in the change of the servo amplifier series are displayed in black.
- When the servo amplifier series is set to "Not used", communication with the servo amplifier does not start. Always select the servo amplifier to be used.
- Since changing the unit setting changes the setting range, any setting other than the default (black characters) may result in a setting range error.
  After changing the unit setting, execute an error check to confirm the setting.
- For GX Configurator-QP version 2.18U or later, the initial value for "Servo response" has been changed from "0005" to "0002".

The parameter setting items and setting values of QD75M have been added to GX Configurator-QP Version 2.13P or later. (Refer to Appendix 3)
The following table indicates operations that will be performed if the project created on GX Configurator-QP Version 2.13P or later is opened on GX Configurator-QP Version 2.12N or earlier.

Type	Item	Setting (Set Value)	Operation Performed when Project Is Opened using GX Configurator-QP earlier than Version 2.12N	Action
Servo parameter (for MR-J2S-B)	Regenerative brake option	For version 2.13P to 2.17T, "B: MR-RB31", "C: MR-RB51"	• Cell (table) is shown red (outside the setting range). • Error check results in error.	Since the setting is retained, it can be saved or written as-is.
		For version 2.18U or later, "00: Not used" "01: FR-RC, FR-BU" "05: MR-RB32", "06: MR-RB34" "07: MR-RB54", "08: MR-RB30" "09: MR-RB50", "0B: MR-RB31" "0C: MR-RB51", "0E: Standard + fan" "10: MR-RB032", "11: MR-RB12" "12: MR-RB14", "13: MR-RB5E" "14: MR-RB5E + fan", "15: MR-RB67" "16: MR-RB67 + fan", "17: MR-RB9F" "18: MR-RB9F + fan", "80: MR-RB3H-4" "81: MR-RB5H-4", "82: MR-RB3G-4" "83: MR-RB5G-4", "84: MR-RB34-4" "85: MR-RB54-4", "86: MR-RB1L-4" "87: MR-RB3L-4"		
Servo parameter (for MR-J2S-B)	Zeroing condition setting selection	"0: It is necessary to pass through one Z-phase after power on." "1: There is no need to pass through one Z- phase after power on."	Not displayed	Since the setting is retained, it can be saved or written as-is.

The defaults (initial values) are displayed if the project created using GX Configurator-QP earlier than Version 2.12N is opened using GX Configurator-QP Version 2.13P or later.

8.3 Positioning Data Setting

This section describes the positioning data setting, the addition of circular interpolation control to the positioning data by specifying a sub point, and speed setting using the axis speed calculation function.
This section also explains the M code comment setting in which the M codes assigned to the positioning data are annotated with comments.

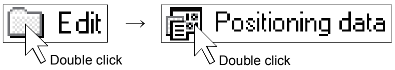
8.3.1 Positioning data

PURPOSE

Set the positioning data such as the operation pattern, control method, SLV axis, acceleration time No., deceleration time No., address and command speed.
For details on positioning data, refer to the user's manual for the positioning module used.

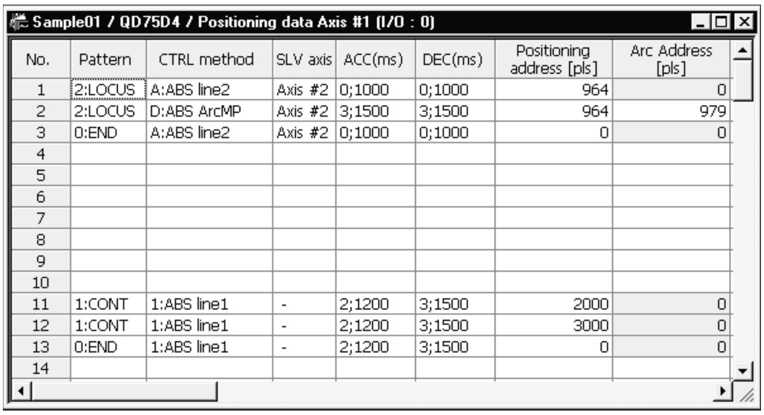
BASIC OPERATION

1. Choose the axis to which the positioning data will be set.



2. Set the data in the positioning data edit window.

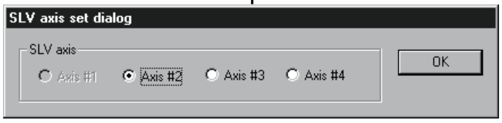
DISPLAY/SETTING SCREEN



Sample01 / QD75D4 / Positioning data Axis #1 (I/O : 0)

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Address [pls]
1	2:LOCUS	A:ABS line2	Axis #2	0;1000	0;1000	964	0
2	2:LOCUS	D:ABS ArcMP	Axis #2	3;1500	3;1500	964	979
3	0:END	A:ABS line2	Axis #2	0;1000	0;1000	0	0
4							
5							
6							
7							
8							
9							
10							
11	1:CONT	1:ABS line1	-	2;1200	3;1500	2000	0
12	1:CONT	1:ABS line1	-	2;1200	3;1500	3000	0
13	0:END	1:ABS line1	-	2;1200	3;1500	0	0
14							

Double-click the cell and make setting in the text box or list box.
For "SLV axis", choose it from the SLV axis set dialog box when the control method is 2-axis interpolation control.



SLV axis set dialog

SLV axis
○ Axis #1 ● Axis #2 ○ Axis #3 ○ Axis #4

When performing operation from the keyboard, enter the value and press the "Enter" key to determine the value.
For "Pattern', "CTRL method", "ACC" and "DEC", press the "space" key to display a list. Make selection with the "↑" or "↓" key, and press the "Enter" key to determine the value.

DISPLAY/SETTING DATA

Item	Description
No.	Indicates the No. of the positioning data. The positioning data that can be ranges from No. 1 to 600. However, No. 1 to 100 are displayed in the initial setting. To change the display range, use the option function (refer to Section 11.5).
Pattern	Choose the operation pattern for positioning control. The selection range is 0 to 2. 0: END (End command) 2: LOCUS (continue locus positioning control) 1: CONT (continue positioning control)
CTRL method	Choose the operation positioning control method from among 1 to 9 and A to Z. 1: ABS line 1 (Axis #1 Linear control (ABS)) 2: INC line 1 (Axis #1 Linear control (INC)) 3: Feed 1 (Axis #1 Fixed-feed control) 4: FWD V1 (Axis #1 Speed control (Forward)) 5: RVS V1 (Axis #1 Speed control (Reverse)) 6: FWD V/P (Speed-Position switching control (Forward)) 7: RVS V/P (Speed-Position switching control (Reverse)) 8: FWD P/V (Position-Speed switching control (Forward)) 9: RVS P/V (Position-Speed switching control (Reverse)) A: ABS line 2 (Axis #2 Linear interpolation control (ABS)) B: INC line 2 (Axis #2 Linear interpolation control (INC)) C: Feed 2 (Fixed-feed control by Axis #2 linear interpolation) D: ABS ArcMP (Circular interpolation control with sub point specified (ABS)) E: INC ArcMP (Circular interpolation control with sub point specified (INC)) F: ABS ArcRGT (Circular interpolation control with center point specified (ABS/CW)) G: ABS ArcLFT (Circular interpolation control with center point specified (ABS/CCW)) H: INC ArcRGT (Circular interpolation control with center point specified (INC/CW)) I: INC ArcLFT (Circular interpolation control with center point specified (INC/CCW)) J: FWD V2 (Axis #2 Speed control (Forward)) K: RVS V2 (Axis #2 Speed control (Reverse)) L: ABS line 3 (Axis #3 Linear interpolation control (ABS)) M: INC line 3 (Axis #3 Linear interpolation control (INC)) N: Feed 3 (Fixed-feed control by Axis #3 linear interpolation) O: FWD V3 (Axis #3 Speed control (Forward)) P: RVS V3 (Axis #3 Speed control (Reverse)) Q: ABS line 4 (Axis #4 Linear interpolation (ABS)) R: INC line 4 (Axis #4 Linear interpolation (INC)) S: Feed 4 (Fixed-feed control by Axis #4 linear interpolation) T: FWD V4 (Axis #4 Speed control (Forward)) U: RVS V4 (Axis #4 Speed control (Reverse)) V: NOP (NOP instruction) W: Address CHG (Current value changing) X: JUMP (JUMP instruction) Y: LOOP (Declear the begining of LOOP to LEND section) Z: LEND (Declear the end of LOOP to LEND section)

Item	Description
SLV axis	Set the interpolation axis when the control method is linear interpolation control (2 axes) or circular interpolation control. Use the SLV axis set dialog box.
ACC DEC	Choose the ACC time or DEC time from among 0 to 3 and set in the basic parameters 2 and extended parameters 2.
Positioning address	Set the address for the absolute system or the travel distance for the incremental system. Set a new current value when the control method is an address change.
Arc Address	Set the address of the sub point or center point designated for circular interpolation control.
Command speed	Set the command speed for positioning. Set the command speed to "-1" to exercise control at the current speed.
Dwell time	• Control method is other than "JUMP" Set the delay time till the next positioning data completion in the range 0 to 65535ms. • Control method is "JUMP" Set any position from No. 1 to 600 of the JUMP destination.
M code	• Control method is other than "JUMP" or "LOOP" Set the M code used to perform work, process, etc. in synchronization with positioning control in the range 1 to 65535. • Control method is "JUMP" Set any of the condition data No. 1 to 10 which is used as the JUMP instruction execution condition. Setting of the condition data whose condition operator is "Simultaneously start axis set" is invalid. Set "0" to execute the JUMP instruction unconditionally. • Control method is "LOOP" Set the repeat count within the range 1 to 65535.
Positioning comment	Assign a comment per positioning data. You can set a comment of up to 32 characters.

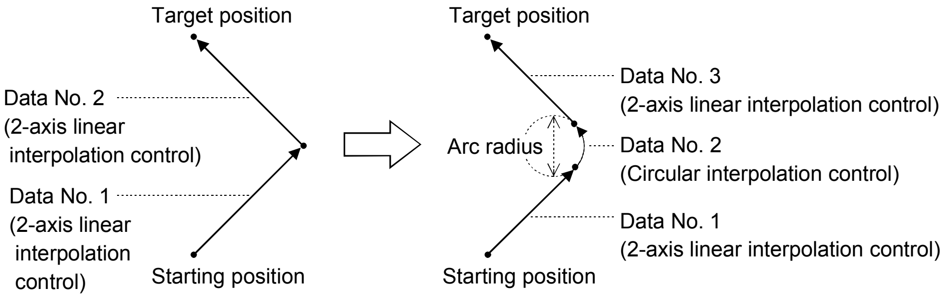
Point

The colors of the cells (list) in the positioning data edit window have the following meanings.

Yellow	: Setting must not be made since the data is on the interpolation axis side of interpolation control.
Red	: Item needing setting is not yet set or is in error.
Gray	: Setting need not be made (setting value is invalid).1)

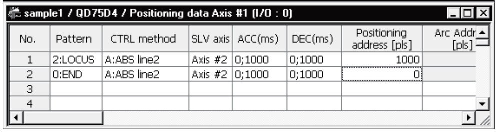
HELPFUL OPERATION (1)

When you want to use a smooth arc (curve) on an intersection of two consecutive linear interpolation controls, you can perform the following operation to insert the circular interpolation control positioning data between the linear interpolation controls.



1. Open the positioning data edit window of the reference axis to which sub arc setting will be made.
2. Click the [Edit] → [Assistance arc] menu.
3. Set "Data" and "SubArc Radius" in the SubArc Setting dialog box.
4. Click the " Calculation " button.
5. The positioning data overwrite confirmation dialog box appears. Click the "OK" button.

<Sub arc setting example>

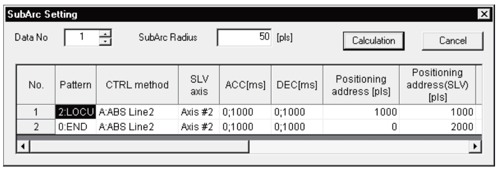


sample1 / QD75D4 / Positioning data Axis #1 (I/O : 0)

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Addr [pls]
1	2:LOCUS	A:ABS line2	Axis #2	0;1000	0;1000	1000	
2	0:END	A:ABS line2	Axis #2	0;1000	0;1000	0	
3							
4							

- Open the positioning data edit window of axis 1 which is used as the reference axis.

↓

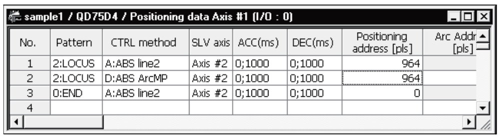


Data No 1 SubArc Radius 50 [pls]

No.	Pattern	CTRL method	SLV axis	ACC[ms]	DEC[ms]	Positioning address [pls]	Positioning address(SLV) [pls]
1	2:LOCU	A:ABS Line2	Axis #2	0;1000	0;1000	1000	1000
2	0:END	A:ABS Line2	Axis #2	0;1000	0;1000	0	2000

- Click the [Edit] → [Assistance arc] menu.
- Set "1" to "Data" and "50" to "SubArc Radius".

↓



sample1 / QD75D4 / Positioning data Axis #1 (I/O : 0)

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Addr [pls]
1	2:LOCUS	A:ABS line2	Axis #2	0;1000	0;1000	964	
2	2:LOCUS	D:ABS ArcMP	Axis #2	0;1000	0;1000	964	
3	0:END	A:ABS line2	Axis #2	0;1000	0;1000	0	
4							

- Click "OK" in the positioning data overwrite dialog box.
- The address of data No. 1 is changed and data No. 2 changes to circular interpolation control data.
  The original data of data No. 2 is set to data No. 3.

Point

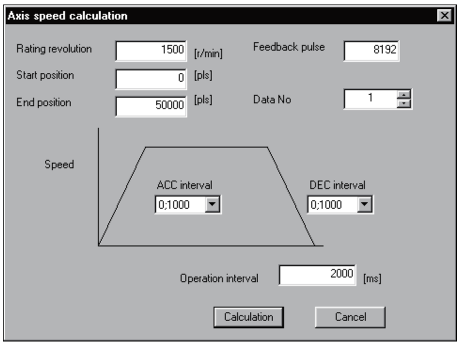
- Since the selected No. and next No. are overwritten by the positioning data created in sub arc setting, leave the next No. as NOP (empty).
- In either of the following cases, you cannot make sub arc setting.
  The control method is other than 2-axis linear interpolation control or fixed-distance feed 2.
  Positioning data setting is in error.

HELPFUL OPERATION (2)

Perform the following operation when you want to determine the command speed from the time needed to complete positioning. Use the axis speed calculation function to calculate the command speed from the travel distance, acceleration time, deceleration time, time needed for positioning completion and so on.
(Note that the QD75M, QD75MH and LD77 cannot be used.)

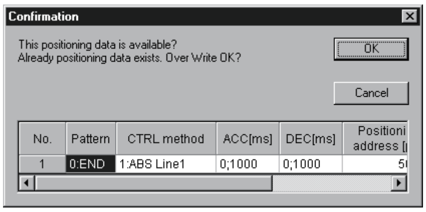
1. Open the positioning data edit window of the corresponding axis. (Active status)
2. Click the [Edit] → [Speed of axis setting] menu.
3. Set the Rating, Feedback, Start position, End position, Operation interval and Data No. in the Axis speed calculation dialog box, and choose ACC interval and DEC interval.
4. Click the "Calculation" button to show the operation result in the Confirmation dialog box.
5. Click "OK" in the Confirmation dialog box to change the command speed to that of the operation result.

[Axis speed calculation dialog box]



Rating revolution 1500 [r/min]
Feedback pulse 8192
Start position 0 [pls]
End position 50000 [pls]
Data No 1
ACC interval 0;1000
DEC interval 0;1000
Operation interval 2000 [ms]

[Confirmation dialog box]



This positioning data is available?
Already positioning data exists. Over Write OK?

No.	Pattern	CTRL method	ACC[ms]	DEC[ms]	Positioni address [
1	0:END	1:ABS Line1	0;1000	0;1000	5

Point

- Axis speed calculation is to be made for the control method of 1-axis linear control (ABS).
- If the axis speed calculated exceeds the speed limit value, setting it to the positioning data will result in an error.
- You cannot perform axis speed calculation if the set number of pulses output exceeds the performance of the QD75/LD75.

  For QD75P1/P2/P4 and LD75P4 (open collector output type)
  Number of output pulses ((rated speed) × (number of feedback pulses) / 60) ≤ 200kpps
  For QD75D1/D2/D4 (differential driver output type)
  Number of output pulses ((rated speed) × (number of feedback pulses) / 60) ≤ 1Mpps
  For LD75P4 (differential driver output type)
  Number of output pulses ((rated speed) × (number of feedback pulses) / 60) ≤ 4Mpps

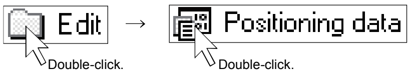
8.3.2 M code comment

PURPOSE

Set comments to M codes which are required for control exercised in synchronization with positioning control.
M code comments are data which can be saved only in the personal computer.
Up to 50 comments can be set for each axis.

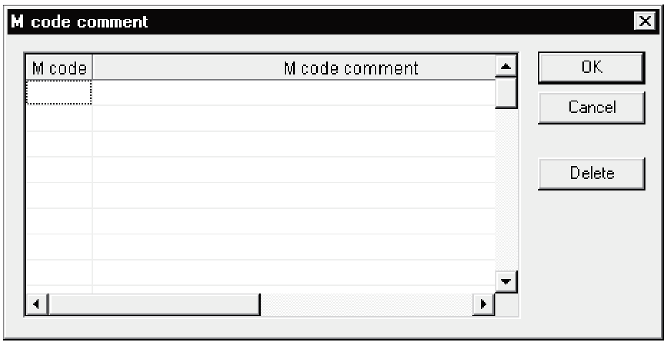
BASIC OPERATION

1. Choose the positioning data of the axis to which the M code comments will be set.



2. Click the [Edit] → [M code comment] menu.
3. Set the M code comments.
4. To exit, click the "OK" button in the M code comment dialog box.

DISPLAY/SETTING SCREEN



DISPLAY/SETTING DATA

Item	Description
M code	Set the M code No. to be commented.
M code comment	Set a comment of up to 32 characters. Up to 50 comments can be set for each axis.
"OK" button	Click this button to finish the setting.
"Delete" button	Click this button to delete the selected comment.

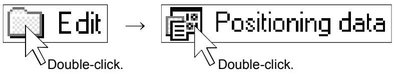
8.4 Simulation

PURPOSE

Execute simulation (virtual positioning) with the set positioning data to check the operation of the axis.
The axis speed is displayed as waveform data for 1-axis control or as locus data for 2-axis interpolation control.
You cannot perform simulation for 3-/4-axis interpolation control.

BASIC OPERATION

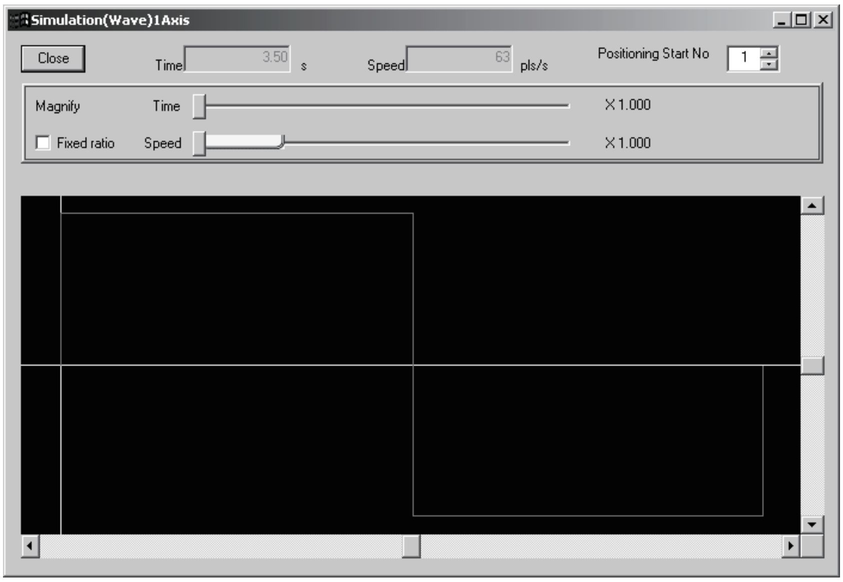
1. Open the positioning data edit window.



2. Click the [Edit] → [Simulation] menu.
3. Type the Positioning Start No. of positioning data in the simulation window.
4. Setting or changing the positioning data being simulated in the positioning data edit window shows the simulation result at the point of data input.
5. To exit, click the "Close" button.

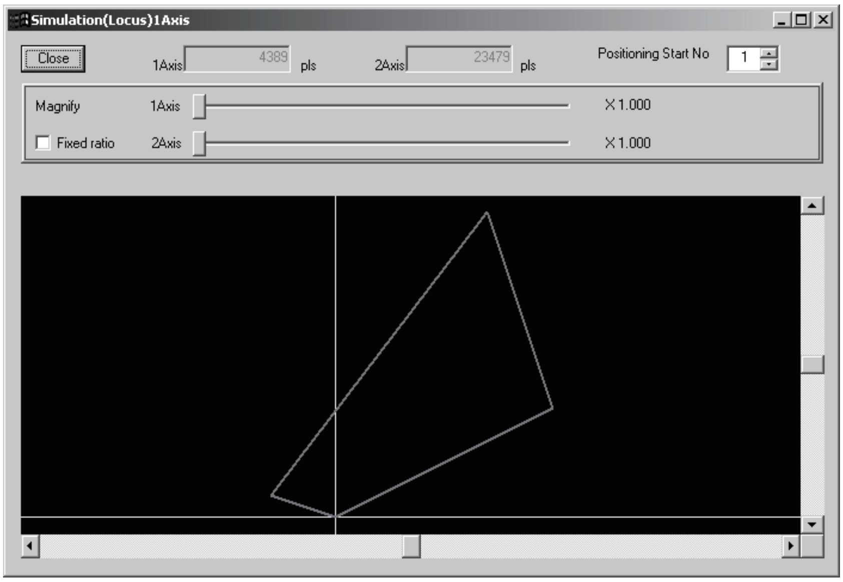
DISPLAY/SETTING SCREEN

[Waveform data for 1-axis control]



Time 3.50 s
Speed 63 pls/s
Positioning Start No 1
Time ×1.000
Speed ×1.000
☐ Fixed ratio

[Locus data for 2-axis interpolation control]



1Axis 4389 pls
2Axis 23479 pls
Positioning Start No 1
1Axis ×1.000
☐ Fixed ratio
2Axis ×1.000

DISPLAY/SETTING DATA

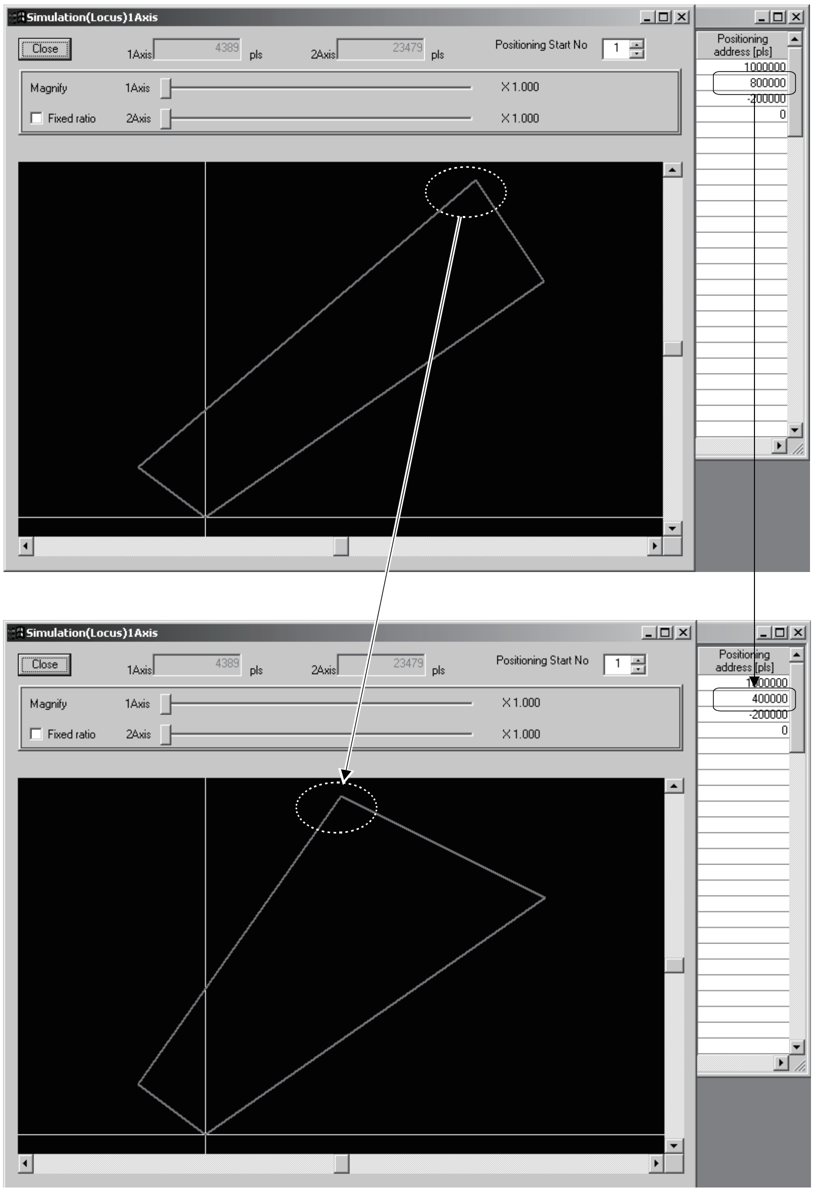
Item	Description
Positioning start No	Set the first positioning data No. from which simulation starts. Simulation is performed on the data from the specified No. to the "END" of the operation pattern.
Magnify	Used to enlarge or reduce the simulation result in the vertical and horizontal directions. Moving the side to the right enlarges the result.
"Fixed ratio" check box	Click the unchecked check box to enlarge/reduce the result in the vertical and horizontal directions by the same ratio.
Time/Speed (Wave data)	Shows the time and axis speed at the position clicked in the simulation result display.
#1 to #4 axis (Locus data)	Shows the coordinates at the position clicked in the simulation result display. In the screen example, the coordinates shown are those of Axis #1 used as the reference axis and Axis #2 used as the interpolation axis.
Simulation result	Shows the simulation result. Changing the positioning data also changes the simulation result in synchronization. For 2-axis interpolation control, the reference axis is in the horizontal direction and the interpolation axis is in the vertical direction. For 1-axis control, time is in the horizontal direction and the axis speed is in the vertical direction. Use the scroll bars to move the display area.

REMARK

In the locus data for circular interpolation control, lines may be broken due to a data processing error during drawing.

HELPFUL OPERATION

When you want to try the command speeds (Wave) or addresses (Locus) at the setting of the positioning data, you can set or change the positioning data while simultaneously checking the simulation result.



1Axis 4389 pls
2Axis 23479 pls
Positioning Start No 1
1Axis ×1.000
2Axis ×1.000

Positioning address [pls]: 1000000, 800000, -200000, 0

Positioning address [pls]: 1000000, 400000, -200000, 0

8.5 Block Start Data Setting

Set the block start data for controlling a positioning start and the condition data used as a condition for a special start.

Point

The block start data is equivalent to the start block data of the AD75.

8.5.1 Block start data

PURPOSE

Specify the positioning data No. as a point, and set the block start data which sets the starting condition, execution order and execution count to each point.
You can set up to 50 points per block.
There are blocks No. 0 to 4 per axis.

BASIC OPERATION

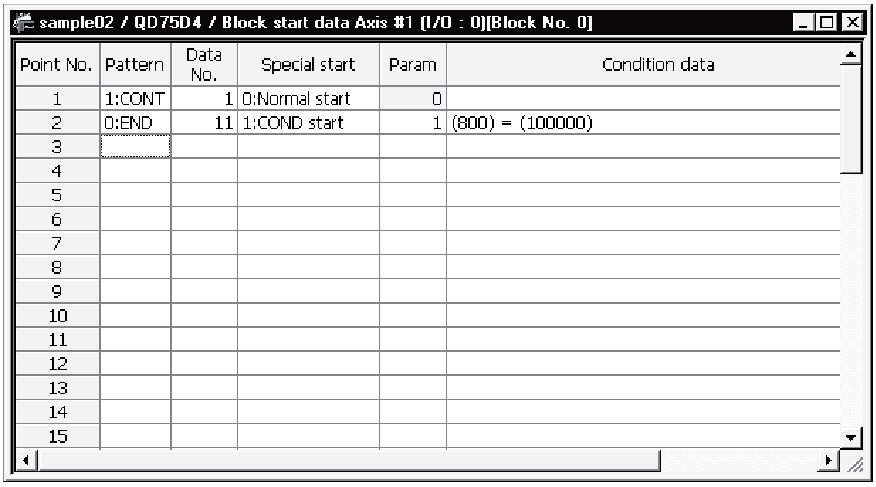
1. Choose the block start data.

Edit → Block start data

Double-click. Double-click.

2. Make settings in the block start data edit window.

DISPLAY/SETTING SCREEN



sample02 / QD75D4 / Block start data Axis #1 (I/O : 0)[Block No. 0]

Point No.	Pattern	Data No.	Special start	Param	Condition data
1	1:CONT	1	0:Normal start	0	
2	0:END	11	1:COND start	1	(800) = (100000)
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Double-click the cell and make settings in the text box or list box.

When performing operation from the keyboard, enter the value and press the "Enter" key to determine the value.
For "Pattern" and "Special start", press the "space" key to display a list.
Make selection with the "↑" or "↓" key, and press the "Enter" key to determine the value.

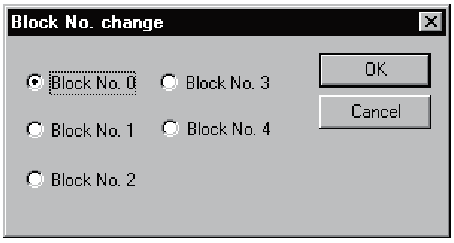
DISPLAY/SETTING DATA

Item	Description
Point No.	Shows the point numbers 1 to 50.
Pattern	Select whether positioning control is ended at the point where positioning was completed or positioning control will be continued to the next point.
Data No.	Set the positioning data No. specified at the point. The setting range is positioning data No. 1 to 600.
Special start	Choose the type of positioning control start per point. The selection range is 0 to 6. 0: Normal start 1: COND start 2: Wait start 3: SIMU start 4: FOR loop 5: FOR condition 6: NEXT start For details on special start, refer to the user's manual for the positioning module used.
Param	When you set a conditional start, wait start, simultaneous start or FOR condition in Special start, set any of the condition data No. 1 to 10 as its condition. (Refer to Section 8.5.2.) When you set FOR loop in Special start, set the repeat count. The setting range is 0 to 255. Setting "0" makes the repeat count limitless.
Condition data	When you set a conditional start, wait start, simultaneous start or FOR condition in Special start, the data of the parameter-set condition data No. appears. Double-clicking opens the condition data edit dialog box. When you set FOR loop in Special start, the "repeat count" appears. Nothing appears when you set a normal start or NEXT start in Special start.

HELPFUL OPERATION

The block start data to be edited defaults to block No. 0.
Perform the following operation to change the block to be edited to any of block No. 1 to 4.

1. Open the block start data edit window.
2. Click the [View] → [Select block start data no] menu.
3. Choose the block to be edited in the Block No. change dialog box, and click the "OK" button.



Block No. change

● Block No. 0
○ Block No. 1
○ Block No. 2
○ Block No. 3
○ Block No. 4

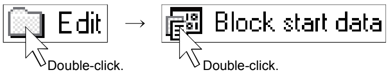
8.5.2 Condition data

PURPOSE

Set the condition data which will be the starting conditions of the conditional start, wait start, simultaneous start and FOR condition in the block start data.

BASIC OPERATION

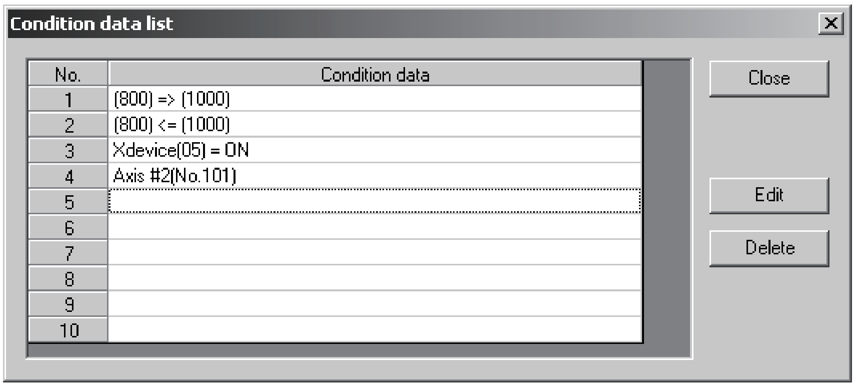
1. Choose the block start data of the axis to which the condition data will be set.



2. Click the [Edit] → [Condition data edit] menu.
3. Choose the data No. to be set in the Condition data list dialog box.
4. Click the "Edit" button in the Condition data list dialog box.
5. Choose the condition operator and condition identifier in the Condition data edit dialog box, and set the condition values.
6. Click the "OK" button in the Condition data edit dialog box.
7. To exit, click the "Close" button in the Condition data list dialog box.

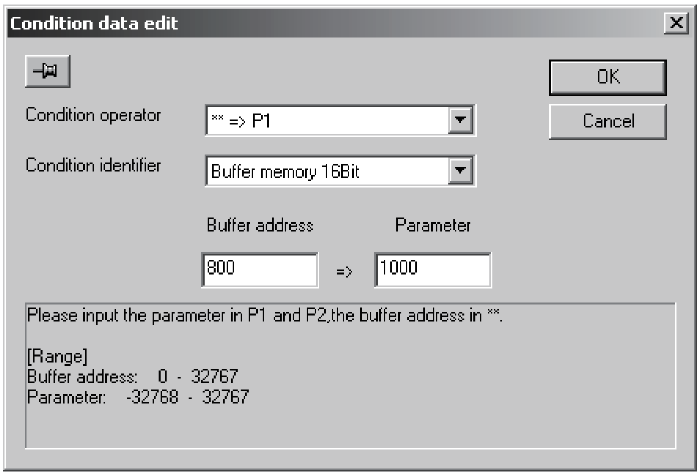
DISPLAY/SETTING SCREEN

[Condition data list dialog box]



No.	Condition data
1	(800) => (1000)
2	(800) <= (1000)
3	Xdevice(05) = ON
4	Axis #2(No.101)
5	
6	
7	
8	
9	
10	

[Condition data edit dialog box]



Condition operator: ** => P1
Condition identifier: Buffer memory 16Bit
Buffer address: 800 => Parameter: 1000

Please input the parameter in P1 and P2,the buffer address in **.

[Range]
Buffer address: 0 - 32767
Parameter: -32768 - 32767

DISPLAY/SETTING DATA

Item	Description
No.	Shows the condition data No.
Condition data	Shows the condition data set in the Condition data edit dialog box.
"Edit" button	Click this button to display the Condition data edit dialog box.
"Delete" button	Click this button to delete the condition data at the cursor.
Condition operator	Choose the type of the condition operator of the condition data. • ＊＊=P1 • ＊＊!=P1 • ＊＊<=P1 • ＊＊=>P1 • P1<=＊＊<=P2 • ＊＊<=P1, P2<=＊＊ • Device=ON • Device=OFF • Simultaneously start axis set ＊＊ indicates the value stored in buffer memory. P1 and P2 indicate parameters (values set as desired). Device indicates the X/Y device.
Condition identifier	Choose the object of the condition operator. • If the condition operator is comparison between ＊＊ and P1 and/or P2 Choose the buffer memory size of 16 or 32 bits. • If the condition operator is device=ON/OFF Choose the device type of X device or Y device. • If the condition operator is simultaneously start, choose the axes to be started at the same time.
Text box	Set the condition object to the condition operator. • If the condition operator is comparison between ＊＊ and P1 and/or P2 Set the buffer memory address in ＊＊. Set to P1 and/or P2 the value of the size set in Condition identifier. • If the condition operator is device=ON/OFF Set the device name. • If the condition operator is simultaneously start Set the positioning data No. of the axes to be started at the same time.
"OK" button	By clicking this button, the settings appear in the Condition data list dialog box.

HELPFUL OPERATION

When setting the condition data consecutively, click 📌 in the Condition data edit dialog box.
Since this causes the Condition data edit dialog box to be kept open if you click the "OK" button, you can edit the condition data by switching it to the Condition data list dialog box.

8.6 Error Check

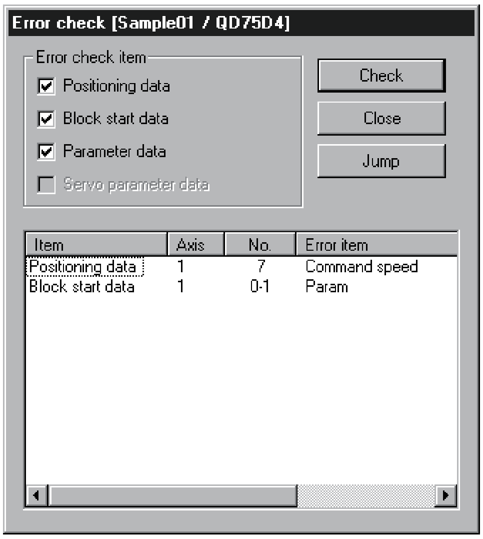
PURPOSE

Execute an error check to check the set parameters, servo parameters, positioning data and block start data for mismatches and setting omissions.
For error check range, refer to the user's manual for the positioning module used.

BASIC OPERATION

1. Set the error-checked project as the active project on the project tree view.
   (Refer to Section 5.2.)
2. Click the [Tool] → [Error check] menu.

DISPLAY/SETTING SCREEN



Error check [Sample01 / QD75D4]

Error check item

☑ Positioning data
☑ Block start data
☑ Parameter data
☐ Servo parameter data

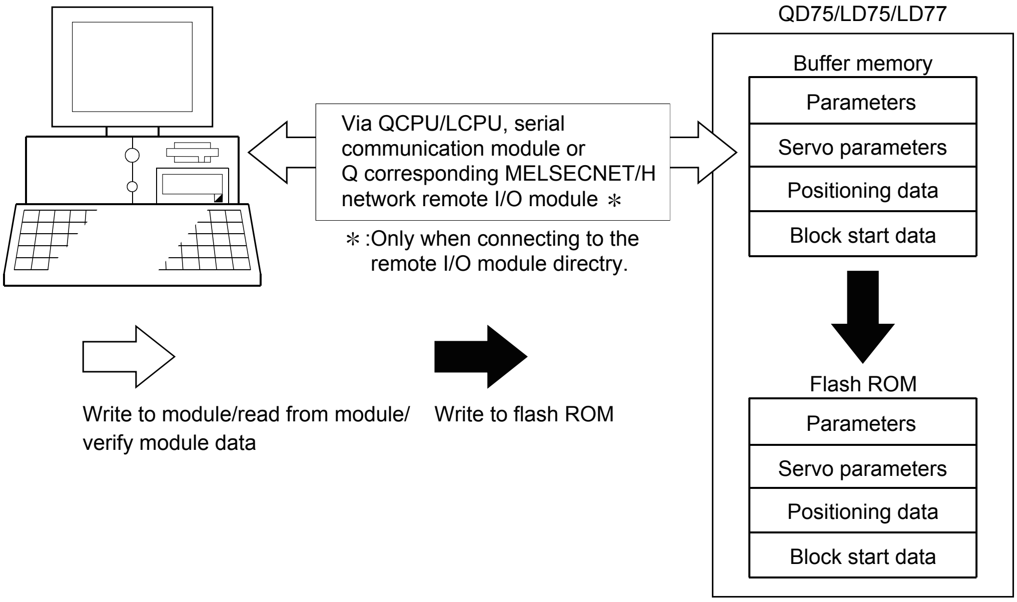
Item	Axis	No.	Error item
Positioning data	1	7	Command speed
Block start data	1	0-1	Param

DISPLAY/SETTING DATA

Item	Description
Error check item	In the check box, set the data on which error check will be made.
"Check" button	Click this button to start error check.
"Jump" button	Click this button to show the error locations.
Error check result	When error check is completed, the number of errors and error locations appear. On the above screen, error locations are the command speed of axis #1 positioning data No. 7 and the parameter at point No. 1 of axis #1 block No. 0.

9. WRITING TO/READING OF/VERIFICATION OF POSITIONING MODULE DATA

Perform write to module/read from module/verify module data, data write from QD75/LD75/LD77 buffer memory to flash ROM, and QD75/LD75/LD77 initialization.


QD75/LD75/LD77
Buffer memory
Parameters
Servo parameters
Positioning data
Block start data
Via QCPU/LCPU, serial communication module or Q corresponding MELSECNET/H network remote I/O module ＊
＊:Only when connecting to the remote I/O module directry.
Flash ROM
Parameters
Servo parameters
Positioning data
Block start data
Write to module/read from module/ verify module data
Write to flash ROM

9.1 Write to Module/Read from Module/Verify Module Data

PURPOSE

Write, read and verify the data set in the project (parameters, servo parameters, positioning data, block start data) on an axis by axis basis.

Point

- Write to module executes a write to the QD75/LD75/LD77 which is set in the active project. When performing batch write to multiple QD75/LD75/LD77s, use the multi-module batch write function. (Refer to Section 11.1.4)
  Note that data cannot be batch-written simultaneously to the positioning module of MELSEC-Q series and that of MELSEC-L series on the same route.
- Whether write to module may be performed or not is determined by the PLC state check setting in Option setting. (Refer to Section 11.5)
- When trying operation while simultaneously changing the positioning data, you can use the positioning data test edit function to write only the positioning data during a test. (Refer to Section 11.7.2)

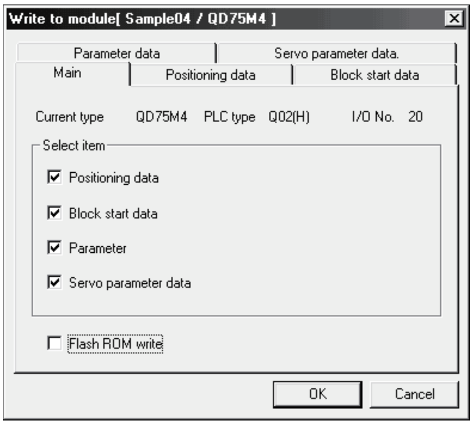
BASIC OPERATION

1. Place the QCPU/LCPU in the STOP status.
   When performing write to QD75/LD75/LD77 without putting the QCPU/LCPU in the STOP status, change the PLC state check setting in Option setting.
2. As an active project, set the project used for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data. Refer to Section 5.2 for the active project setting.
3. Click the [Online] → [Write to module] ( )/[Read from module] ( )/Verify module data] ( ) menu.
4. Set the data type and range in the Write to module/ Read from module/Verify module data dialog box.
5. Click the "OK" button to start operation.
6. For module data verify, the verify result appears.

DISPLAY/SETTING SCREEN

<Write to module>

<<Main>> tab screen



Current type QD75M4 PLC type Q02(H) I/O No. 20

Select item

☑ Positioning data

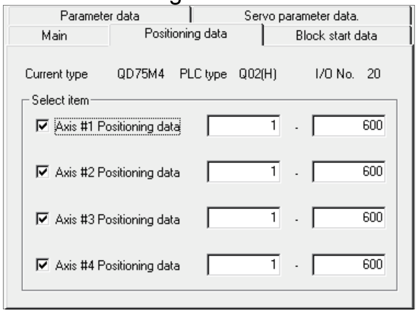
☑ Block start data

☑ Parameter

☑ Servo parameter data

☐ Flash ROM write

<<Positioning data>> tab screen



Current type QD75M4 PLC type Q02(H) I/O No. 20

Select item

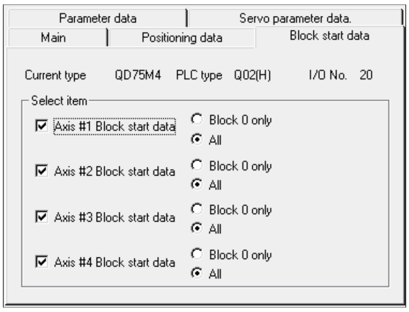
☑ Axis #1 Positioning data 1 - 600

☑ Axis #2 Positioning data 1 - 600

☑ Axis #3 Positioning data 1 - 600

☑ Axis #4 Positioning data 1 - 600

<<Block start data>> tab screen



Current type QD75M4 PLC type Q02(H) I/O No. 20

Select item

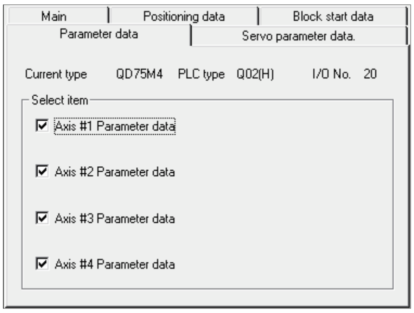
☑ Axis #1 Block start data ○ Block 0 only ● All

☑ Axis #2 Block start data ○ Block 0 only ● All

☑ Axis #3 Block start data ○ Block 0 only ● All

☑ Axis #4 Block start data ○ Block 0 only ● All

<<Parameter data>> tab screen



Current type QD75M4 PLC type Q02(H) I/O No. 20

Select item

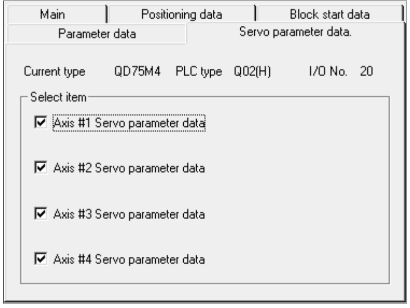
☑ Axis #1 Parameter data

☑ Axis #2 Parameter data

☑ Axis #3 Parameter data

☑ Axis #4 Parameter data

<<Servo parameter data>> tab screen



Current type QD75M4 PLC type Q02(H) I/O No. 20

Select item

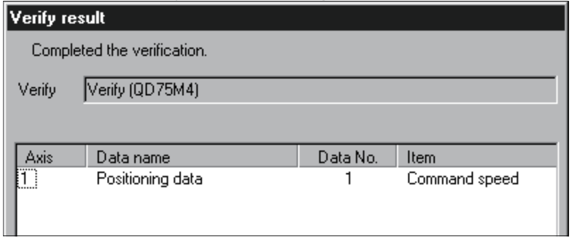
☑ Axis #1 Servo parameter data

☑ Axis #2 Servo parameter data

☑ Axis #3 Servo parameter data

☑ Axis #4 Servo parameter data

<Verify module data>
[Verify result dialog box]



Completed the verification.

Verify: Verify (QD75M4)

Axis	Data name	Data No.	Item
1	Positioning data	1	Command speed

DISPLAY/SETTING DATA

Item	Description
Positioning data Block start data Parameter	Set the data used for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data from positioning data, block start data and parameters. Block start data includes condition data.
"Flash ROM write" check box	When performing write to QD75/LD75/LD77, set a request to write from buffer memory to flash ROM at the same time.
Current type	Set the model of the QD75/LD75/LD77 connected to the peripheral device and the range of write/read/verify.
<<Positioning data>> tab <<Block start data>> tab <<Parameter data>> tab	Click the corresponding tab to display the screen which is used to set the axes and ranges of the data for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data.
<<Positioning data>> tab screen	Set the axes of the positioning data used for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data. Also, set the positioning data No.s in the write/read/verify range on an axis by axis basis.
<<Block start data>> tab screen	Set the axes of the block start data used for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data. Also, set the range of the QD75/LD75/LD77 write/read/verify block on an axis basis.
<<Parameter data>> tab screen	Set the axes used for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data.
<<Servo parameter data>> tab screen	Set the axes used for write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data
"OK" button	Click this button to start write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data.
Verify result dialog box	After QD75/LD75/LD77 data verify is completed, differences between the QD75/LD75/LD77 and project appear. The screen displays that the speed limit value of the axis #1 basic parameter 2 and the software stroke limit upper/lower limit value of the extended parameter 1 differ between the QD75/LD75/LD77 and project. If there are more than 100 mismatches, verify processing is suspended as soon as the number of mismatches reaches 100.

Point

- Only data configured for setting items of GX Configurator-QP can be verified. GX Configurator-QP.
- The following data are saved in the peripheral device only and write to QD75/LD75/LD77/read from QD75/LD75/LD77/verify QD75/LD75/LD77 data cannot be performed.
  M code comments
  Positioning data comments
- Performing auto tuning on QD75MH/LD77 may change some servo parameters to auto tuning results, causing a verification error.

9.2 Servo Amplifier Data Read

PURPOSE

Read the servo parameters used in the servo amplifiers to the QD75M buffer memory.
(Note that they cannot be read in QD75P/QD75D/QD75MH/LD75/LD77 projects.)

Point

The servo parameters read to the QD75M buffer memory are not written to the flash ROM. To write them to the flash ROM, write them to the flash ROM separately.

BASIC OPERATION

1. Place the QCPU in the STOP status.
   When performing servo amplifier data read without putting the QCPU in the STOP status, change the PLC state check setting in Option setting.
2. On the project tree view, set the required project as an active project. (Refer to Section 5.2.)
3. Click the [Online] → [Servo amplifier data read] menu.
4. Click the "Action" button in the servo amplifier data read dialog box.

9.3 Flash ROM write request

PURPOSE

Issue the command to write the QD75/LD75/LD77 buffer memory data to the flash ROM.
Write from buffer memory to flash ROM is batch-performed in the full ranges of the parameters, servo parameters, positioning data and block start data (including condition data).

Point

Whether the flash ROM request may be performed or not is determined by the PLC state check setting in Option setting. (Refer to Section 11.5)

BASIC OPERATION

1. Place the QCPU/LCPU in the STOP status.
   When performing the flash ROM write request without putting the QCPU/LCPU in the STOP status, change the PLC state check setting in Option setting.
2. On the project tree view, set the required project as an active project. (Refer to Section 5.2)
3. Click the [Online] → [Flash ROM request] menu.
4. Click the "Action" button in the Flash ROM request dialog box.
5. Click the "Yes" button in the execution confirmation dialog box.

9.4 Module Initialization

PURPOSE

When the system is renewed, for example, initialize the QD75/LD75/LD77 flash ROM and buffer memory to place them in the factory-set status (default settings).

Point

Whether module initialization may be performed or not is determined by the PLC state check setting in Option setting. (Refer to Section 11.5)

BASIC OPERATION

1. Place the QCPU/LCPU in the STOP status.
   When performing module initialization without putting the QCPU/LCPU in the STOP status, change the PLC state check setting in Option setting.
2. On the project tree view, set the required project as an active project. (Refer to Section 5.2)
3. Click the [Online] → [Initialize module] menu.
4. Click the "Action" button in the Initialize module dialog box.
5. Click the "Yes" button in the execution confirmation dialog box.

10. POSITIONING DEBUGGING

Debug positioning operation by checking the parameters, positioning data and other data set to the QD75/LD75/LD77 for errors, monitoring the positioning operation, and performing various operation tests by positioning data test operation and JOG operation.

Point

All axes stop if a communications error occurs, e.g. GX Configurator-QP is forced to end, the peripheral device is powered off, or the connection cable is disconnected, in the test mode.
In addition, the test mode of the QD75/LD75/LD77 is canceled after the wait time (set value × 500ms) in Connection setup has elapsed.

HELPFUL OPERATION (PART 1)

If an error has occurred during monitoring or testing, perform the following operation.

1. Check the axis status using Operation monitor (refer to Section 10.2.2).
2. When the axis status indicated is error, click the "Message" button and check the error code and message.
3. For the error code, confirm the error cause and its corrective action using the error/warning help.
4. Click the [Online] → [Test] → [Error reset] → [Error reset #1 to #4] menu (① to ④).
5. Remove the error cause according to the corrective action.

HELPFUL OPERATION (PART 2)

To turn off the M code during monitoring or testing, perform the following operation.
Click the [Online] → [Test] → [M code off] → [M code off #1 to #4] menu (M1 to M2).

HELPFUL OPERATION (PART 3)

To stop all operating axes during monitoring or testing due to an external equipment fault, etc. perform the following operation.
Click the [Online] → [Test] → [All axis stop] menu (STOP).

10.1 Error Check Module Data

PURPOSE

Execute an error check on the parameters, servo parameters, positioning data and block start data stored in the buffer memory of the specified QD75/LD75/LD77.
For actions taken for check results, refer to the user's manual for the positioning module used.

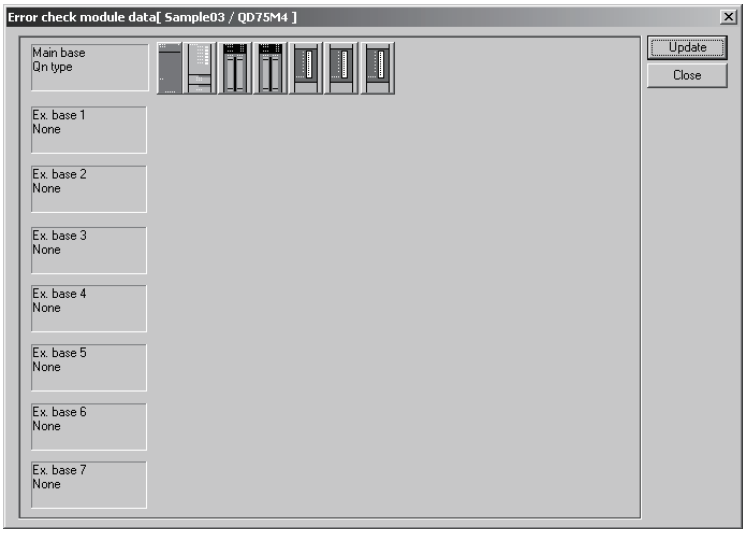
BASIC OPERATION

1. Choose the [Online] → [Error check module data] menu ( ).
2. Operation differs depending on the target module of the active project.
   - For the QD75, connected QD75 is displayed in the System monitor dialog box. Clicking the corresponding QD75 illustration will open the Error check module data dialog box.
   - For the LD75 and LD77, the Error check module data dialog box for the target module of the active project will open.

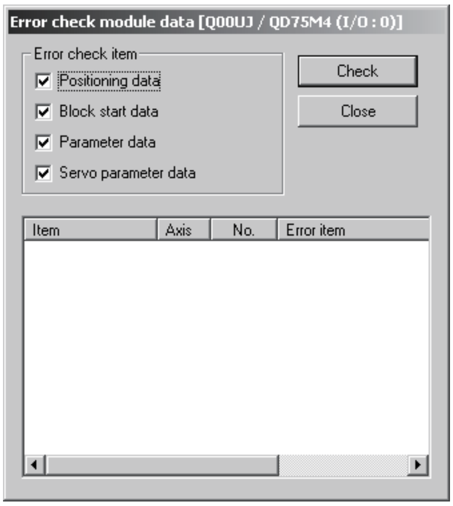
Refer to Error Check (Section 8.6) for the operation that follows.

DISPLAY/SETTING SCREEN

[System monitor dialog box]



[Error check module data dialog box]



☑ Positioning data
☑ Block start data
☑ Parameter data
☑ Servo parameter data

10.2 Monitor

Monitor the positioning data and block start data execution states on an axis by axis basis, or perform detailed monitor of the error histories, signal states, present values, speeds, etc. on a project basis.

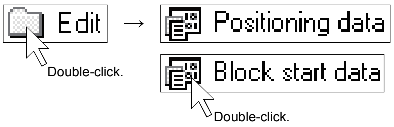
10.2.1 Monitoring the positioning data/block start data

PURPOSE

From the positioning data/block start data edit window of any axis, monitor the positioning data No.s or block No.s and point No.s being executed.

BASIC OPERATION

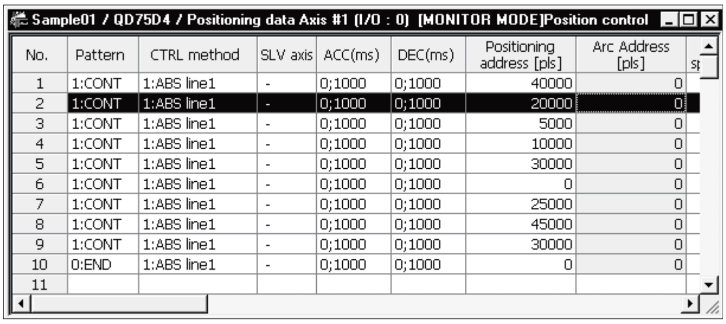
1. Choose the positioning or block start data edit window.



2. Click the [Online] → [Monitor] → [Monitor On/Off] menu ( ).
3. To exit, click the [Online] → [Monitor] → [Monitor On/Off] menu ( ).

DISPLAY/SETTING SCREEN

[For positioning data monitor]



Sample01 / QD75D4 / Positioning data Axis #1 (I/O : 0) [MONITOR MODE]Position control

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc Address [pls]
1	1:CONT	1:ABS line1	-	0;1000	0;1000	40000	0
2	1:CONT	1:ABS line1	-	0;1000	0;1000	20000	0
3	1:CONT	1:ABS line1	-	0;1000	0;1000	5000	0
4	1:CONT	1:ABS line1	-	0;1000	0;1000	10000	0
5	1:CONT	1:ABS line1	-	0;1000	0;1000	30000	0
6	1:CONT	1:ABS line1	-	0;1000	0;1000	0	0
7	1:CONT	1:ABS line1	-	0;1000	0;1000	25000	0
8	1:CONT	1:ABS line1	-	0;1000	0;1000	45000	0
9	1:CONT	1:ABS line1	-	0;1000	0;1000	30000	0
10	0:END	1:ABS line1	-	0;1000	0;1000	0	0
11							

DISPLAY/SETTING DATA

Item	Description
Positioning data monitor/block start data monitor	For positioning data monitor, the positioning data in execution is highlighted. For block start data monitor, the point in execution is highlighted.

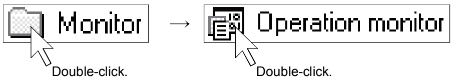
10.2.2 Operation monitor

PURPOSE

Monitor the feed present value, axis feed speed, axis status, positioning data No. executed last, error/warning code occurring currently, and M code of each axis. This monitor is used to confirm the basic axis states.

BASIC OPERATION

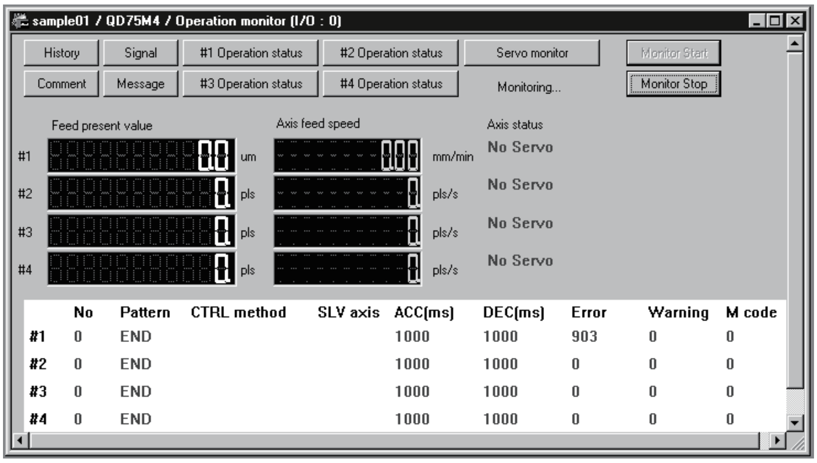
1. Choose Operation monitor.



2. Click the "Monitor start" button.
3. To exit, click the "Monitor stop" button.1. Choose Operation monitor.

DISPLAY/SETTING SCREEN

[Operation monitor dialog box]



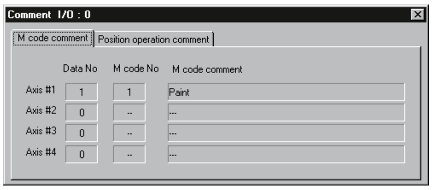
sample01 / QD75M4 / Operation monitor (I/O : 0)

Monitoring...

	Feed present value		Axis feed speed		Axis status
#1	0.0	um	0.00	mm/min	No Servo
#2	0	pls	0	pls/s	No Servo
#3	0	pls	0	pls/s	No Servo
#4	0	pls	0	pls/s	No Servo

	No	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Error	Warning	M code
#1	0	END			1000	1000	903	0	0
#2	0	END			1000	1000	0	0	0
#3	0	END			1000	1000	0	0	0
#4	0	END			1000	1000	0	0	0

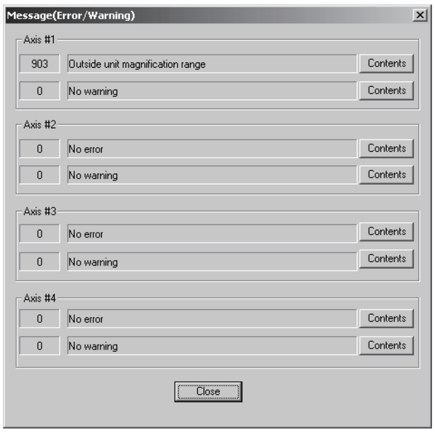
[Comment dialog box]



Comment I/O : 0

	Data No	M code No	M code comment
Axis #1	1	1	Paint
Axis #2	0	--	---
Axis #3	0	--	---
Axis #4	0	--	---

[Error/Warning message dialog box]



Message(Error/Warning)

Axis #1
903 Outside unit magnification range
0 No warning

Axis #2
0 No error
0 No warning

Axis #3
0 No error
0 No warning

Axis #4
0 No error
0 No warning

DISPLAY/SETTING DATA

Item	Description
Title bar	Shows the project name and I/O address.
Feed present value	Indicates the feed present value. Buffer memory address (Axis #1): 800, 801
Axis feed speed	Indicates the feed speed. Buffer memory address (Axis #1): 812, 813
Axis status	Indicates the axis status. Buffer memory address (Axis #1): 809
No	Indicates the positioning data No. in execution. Note that if other than the positioning data No. is specified for operation, its starting number is displayed. Buffer memory address (Axis #1): 835
Pattern	Indicates the positioning data pattern in execution. Buffer memory address (Axis #1): 838
CTRL method	Indicates the positioning data control method in execution. Buffer memory address (Axis #1): 838
SLV axis	Shows the interpolation axis when the control method is 2-axis linear interpolation control or circular interpolation control.
ACC DEC	Indicates the acceleration and deceleration times selected in the positioning data in execution. For the acceleration and deceleration times, refer to Parameter Setting (Section 8.1). Buffer memory address (Axis #1): 838
Error Warning	Shows the error and warning codes when an error and warning have occurred. "0" is displayed when no error/warning has occurred. The error/warning codes can be confirmed in [Help]. Buffer memory address (Axis #1/error): 806, Buffer memory address (Axis #1/warning): 807
M code	Indicates the M code of the positioning data in execution. Buffer memory address (Axis #1): 808
"History" button "Signal" button "#1 Operation status" button "#2 Operation status" button "#3 Operation status" button "#4 Operation status" button "Servo monitor" button	Click the corresponding button to display the history, signal, operation or servo monitor dialog box. The operation monitor dialog box appears per axis. Refer to Section 10.2.3 for history monitor. Refer to Section 10.2.4 for signal monitor. Refer to Section 10.2.5 for operation monitor. Refer to Section 10.2.6 for servo monitor.
"Comment" button	Click this button to display the dialog box which shows the positioning data or M code comments in execution.
"Message" button	Click this button at error occurrence to show the Error/Warning message dialog box.
"Monitor start" button	Click this button to start monitor.
"Monitor stop" button	Click this button to stop monitor.
Comment dialog box	Shows the positioning data or M code comments in execution.
Error/Warning message dialog box	Shows the error or warning which is occurring per axis. The error code and error name are in the top field. The warning code and error warning are in the bottom field.

10.2.3 History monitor

PURPOSE

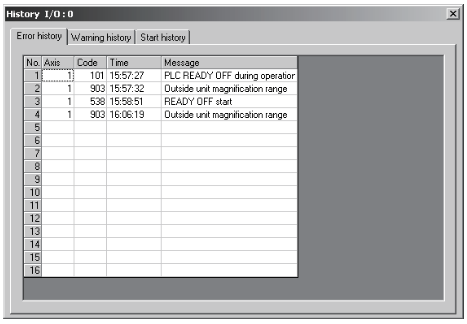
Monitor the error, warning and start histories stored in the QD75/LD75/LD77 buffer memory during operation monitor.

BASIC OPERATION

1. Perform the basic operation in Section 10.2.2 to display the operation monitor window.
2. Click the "History" button on the operation monitor window.
3. Click the <<Error history>>/<<Warning history>>/<<Start history>> tab.

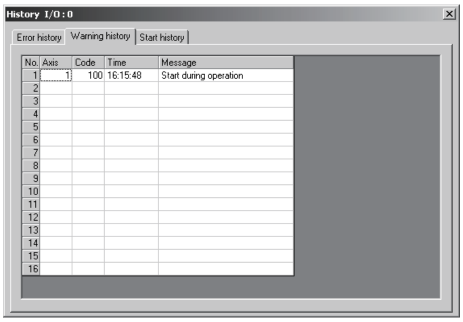
DISPLAY/SETTING SCREEN

[Error history monitor]



No.	Axis	Code	Time	Message
1	1	101	15:57:27	PLC READY OFF during operatior
2	1	903	15:57:32	Outside unit magnification range
3	1	538	15:58:51	READY OFF start
4	1	903	16:06:19	Outside unit magnification range
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

[Warning history monitor]



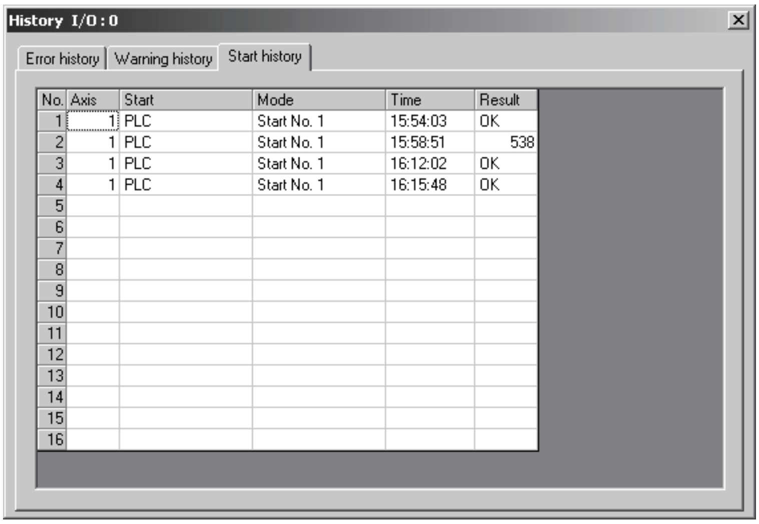
No.	Axis	Code	Time	Message
1	1	100	16:15:48	Start during operation
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

DISPLAY/SETTING DATA

Item	Description
Title bar	Shows the I/O address of the QD75/LD75/LD77 being monitored.
No	Represents the order of errors/warnings which occurred since power-on. If more than 16 errors/warnings occurred, the older ones are deleted.
Axis	Shows the axis where the error/warning occurred. Buffer memory address (newest error): 1293 Buffer memory address (newest warning): 1358
Code	Shows the error/warning code. Buffer memory address (newest error): 1294 Buffer memory address (newest warning): 1359
Time	Shows the error/warning occurrence time in hour:minute:second format. Buffer memory address (newest error): 1295, 1296 Buffer memory address (newest warning): 1360, 1361
Message	Shows the error/warning name.

DISPLAY/SETTING SCREEN

[Start history monitor]



No.	Axis	Start	Mode	Time	Result
1	1	PLC	Start No. 1	15:54:03	OK
2	1	PLC	Start No. 1	15:58:51	538
3	1	PLC	Start No. 1	16:12:02	OK
4	1	PLC	Start No. 1	16:15:48	OK
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

DISPLAY/SETTING DATA

Item	Description
Title bar	Shows the I/O address of the QD75/LD75/LD77 being monitored.
No	Represents the order of starts since power-on. If there are more than 16 starts, the older ones are deleted.
Axis	Indicates the axis started. Buffer memory address: 1212
Start	Indicates the start command destination. The command destination is the programmable controller CPU, GX Configurator-QP or external signal. Buffer memory address: 1212
Mode	Indicates the type of operation started. The positioning data No. is displayed for operation which uses the positioning data. Buffer memory address: 1213
Time	Indicates the start occurrence time in hour:minute:second format. Buffer memory address: 1214, 1215
Result	Shows OK for a normal start. Shows the error code when an error occurs. The definition of the error code displayed can be confirmed by the help function. Buffer memory address: 1216

10.2.4 Signal monitor

PURPOSE

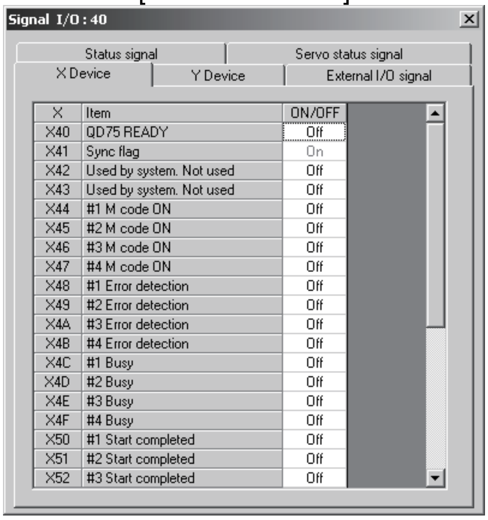
Monitor the I/O signals (X/Y device), external I/O signals and status signals of the QD75/LD75/LD77.
For details on the signals, refer to the user's manual for the positioning module used.

BASIC OPERATION

1. Perform the basic operation in Section 10.2.2 to display the operation monitor window.
2. Click the "Signal" button in the operation monitor window.
3. Click the <<X Device>>/<<Y Device>>/<<External I/O signal>>/<<Status signal>>/<<Servo status signal>> tab.

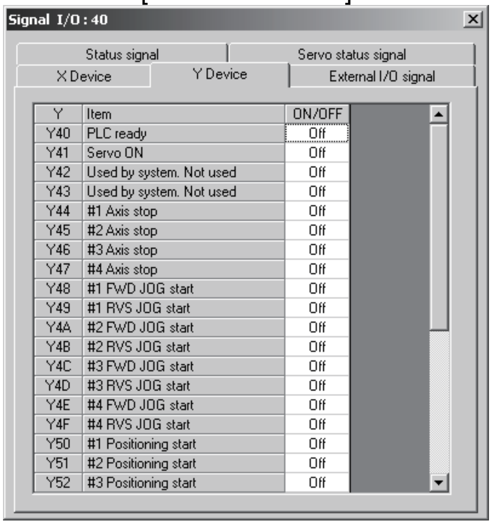
DISPLAY/SETTING SCREEN

[X Device monitor]



X	Item	ON/OFF
X40	QD75 READY	Off
X41	Sync flag	On
X42	Used by system. Not used	Off
X43	Used by system. Not used	Off
X44	#1 M code ON	Off
X45	#2 M code ON	Off
X46	#3 M code ON	Off
X47	#4 M code ON	Off
X48	#1 Error detection	Off
X49	#2 Error detection	Off
X4A	#3 Error detection	Off
X4B	#4 Error detection	Off
X4C	#1 Busy	Off
X4D	#2 Busy	Off
X4E	#3 Busy	Off
X4F	#4 Busy	Off
X50	#1 Start completed	Off
X51	#2 Start completed	Off
X52	#3 Start completed	Off

[Y Device monitor]



Y	Item	ON/OFF
Y40	PLC ready	Off
Y41	Servo ON	Off
Y42	Used by system. Not used	Off
Y43	Used by system. Not used	Off
Y44	#1 Axis stop	Off
Y45	#2 Axis stop	Off
Y46	#3 Axis stop	Off
Y47	#4 Axis stop	Off
Y48	#1 FWD JOG start	Off
Y49	#1 RVS JOG start	Off
Y4A	#2 FWD JOG start	Off
Y4B	#2 RVS JOG start	Off
Y4C	#3 FWD JOG start	Off
Y4D	#3 RVS JOG start	Off
Y4E	#4 FWD JOG start	Off
Y4F	#4 RVS JOG start	Off
Y50	#1 Positioning start	Off
Y51	#2 Positioning start	Off
Y52	#3 Positioning start	Off

(Screen example: Screen displayed when the QD75M is chosen in model selection)

DISPLAY/SETTING DATA

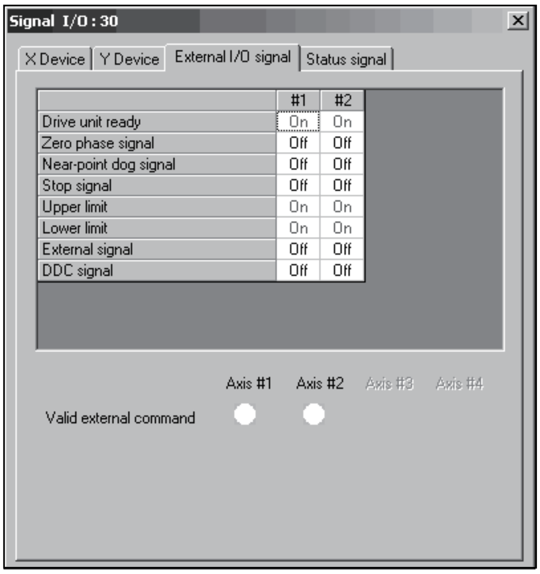
Item	Description
Title bar	Shows the I/O address of the QD75/LD75/LD77 being monitored.
X Device	Displays the On/Off states of the QD75/LD75/LD77 input signals.
Y Device	Displays the On/Off states of the QD75/LD75/LD77 output signals. The Y device type depends on the model chosen in model selection.

Point

Signal monitor for Pre-reading start function (Y14 to Y17: Axis # □ execution prohibition flags) is compatible with the QD75 of function version "B" or later.
To confirm the function version of the QD75/LD75/LD77, refer to "Section 7.3 Checking the Positioning Module Function Version (OS Information)".

DISPLAY/SETTING SCREEN

[External I/O signal monitor]



	#1	#2
Drive unit ready	On	On
Zero phase signal	Off	Off
Near-point dog signal	Off	Off
Stop signal	Off	Off
Upper limit	On	On
Lower limit	On	On
External signal	Off	Off
DDC signal	Off	Off

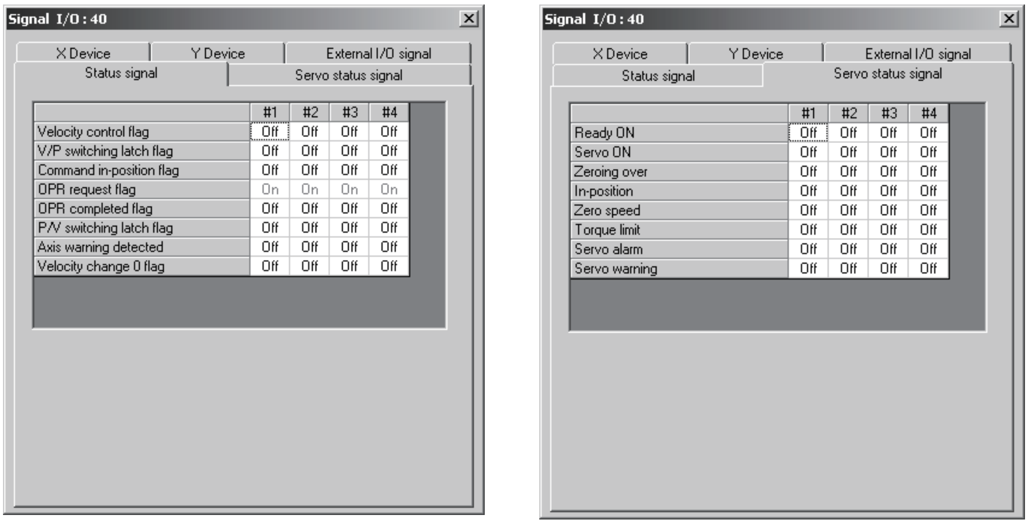
	Axis #1	Axis #2	Axis #3	Axis #4
Valid external command	○	○		

(Screen example: Screen displayed when the QD75P or QD75D is chosen in model selection)

DISPLAY/SETTING DATA

Item	Description
Title bar	Shows the I/O address of the QD75/LD75/LD77 being monitored.
External I/O signal	Shows the On/Off states of the QD75/LD75/LD77 's external I/O signals. The displayed external I/O signal type depends on the model chosen in model selection. Buffer memory address (Axis #1): 816
Valid external command	Shows whether the start, V/P switch and P/V switch commands given by the external start signals are valid (●) or invalid (○). Buffer memory address (Axis #1): 1505

DISPLAY/SETTING SCREEN



[Status signal monitor]

	#1	#2	#3	#4
Velocity control flag	Off	Off	Off	Off
V/P switching latch flag	Off	Off	Off	Off
Command in-position flag	Off	Off	Off	Off
OPR request flag	On	On	On	On
OPR completed flag	Off	Off	Off	Off
P/V switching latch flag	Off	Off	Off	Off
Axis warning detected	Off	Off	Off	Off
Velocity change 0 flag	Off	Off	Off	Off

[Servo status signal monitor]

	#1	#2	#3	#4
Ready ON	Off	Off	Off	Off
Servo ON	Off	Off	Off	Off
Zeroing over	Off	Off	Off	Off
In-position	Off	Off	Off	Off
Zero speed	Off	Off	Off	Off
Torque limit	Off	Off	Off	Off
Servo alarm	Off	Off	Off	Off
Servo warning	Off	Off	Off	Off

(Screen example: Screen displayed when the QD75M is chosen in model selection)

DISPLAY/SETTING DATA

Item	Description
Title bar	Shows the I/O address of the QD75/LD75/LD77 being monitored.
Status signal	Shows the On/Off states of the QD75/LD75/LD77 's status signals. Buffer memory address (Axis #1): 817
Servo status signal	Shows the On/Off states of the QD75/LD75/LD77 's servo status signals. The servo status signals are displayed only when the QD75M/QD75MH/LD77 is chosen in model selection. Buffer memory address (Axis #1): 877 (QD75M)/876, 877 (QD75MH/LD77)

10.2.5 Axis operation monitor

PURPOSE

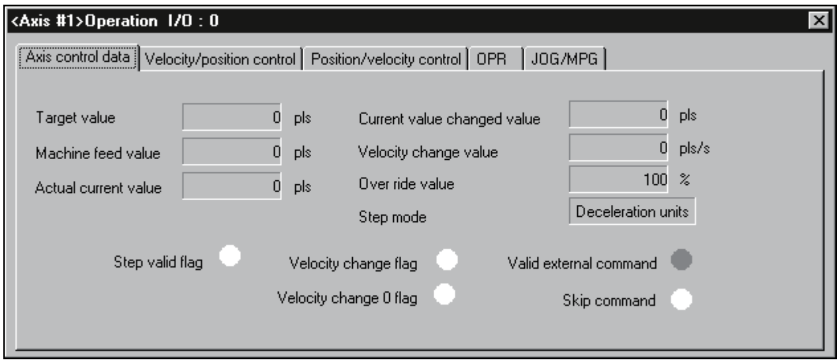
Monitor the settings, states and others of the axis control data, velocity/position control, position/velocity control, original point return and JOG/MPG operation during operation monitor.
With operation monitor, you can check the detailed states of operation and the QD75/LD75/LD77 settings made with the program or peripheral device.
For each monitor item, refer to the user's manual for the positioning module used.

BASIC OPERATION

1. Perform the basic operation in Section 10.2.2 to display the operation monitor window.
2. Click the "<Axis #1 to #4> Operation" button in the operation monitor window.
3. Click the <<Axis control data>>/<<Velocity/position control>>/<<Position/velocity control>>/<<OPR>>/<<JOG/MPG>> tab in the Operation dialog box.

DISPLAY/SETTING SCREEN

[Axis control data monitor]


<Axis #1>Operation I/O : 0
Axis control data
Velocity/position control
Position/velocity control
OPR
JOG/MPG

Target value 0 pls
Machine feed value 0 pls
Actual current value 0 pls
Current value changed value 0 pls
Velocity change value 0 pls/s
Over ride value 100 %
Step mode Deceleration units
Step valid flag ○
Velocity change flag ○
Valid external command ●
Velocity change 0 flag ○
Skip command ○

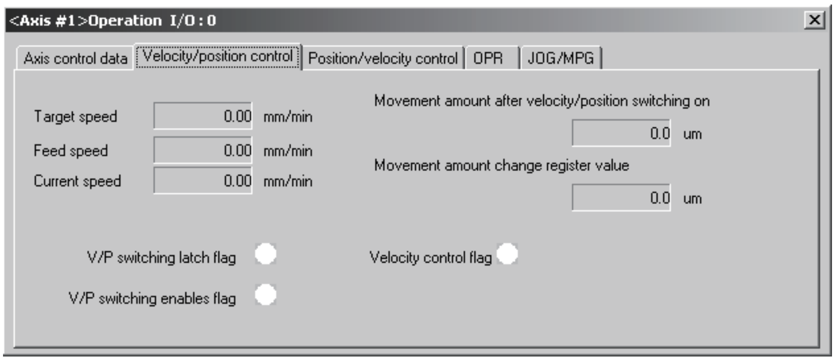
(Screen example: Axis #1 operation monitor screen displayed when the QD75M is chosen in model selection)

DISPLAY/SETTING DATA

Item	Description
Title bar	Shows the I/O address of the QD75/LD75/LD77 being monitored.
Target value	Shows the destination for positioning control. For velocity/position switching control or position/velocity switching control, "0" is displayed for velocity control and the destination appears for position control. "0" is shown for other operations. Buffer memory address (Axis #1): 818, 819
Machine feed value	Indicates the current position whose original point is the inherent position determined by the machine (mechanical coordinates). On completion of OPR, this value indicates the original point address. Buffer memory address (Axis #1): 802, 803
Actual current value	Shows the actual current value. The original point address is displayed at completion of OPR. The actual current value is displayed only when the QD75M/QD75MH/LD77 is chosen in model selection. Buffer memory address (Axis #1): 850, 851
Current value changed value	Shows the feed current value changed with the positioning start No. 9003. Buffer memory address (Axis #1): 1506, 1507
Velocity change value	Shows the value of speed change made during positioning operation or JOG operation. Buffer memory address (Axis #1): 1514, 1515
Over ride value	Indicates the override speed set in the program. Buffer memory address (Axis #1): 1513
Step mode	Indicates the type of the step operation set in the program. Buffer memory address (Axis #1): 1544
Step valid flag	Shows that the step operation set in the program is valid. ● (ON) indicates that the step operation is valid. Buffer memory address (Axis #1): 1545
Velocity change flag	Shows ● (ON) during speed changing. Buffer memory address (Axis #1): 831
Velocity change 0 flag	Shows ● (ON) when the speed is changed to 0 for speed changing. Buffer memory address (Axis #1): 817 (b10)
Valid external command	Shows that the external command signal set in the program is valid. ● (ON) indicates that the start, velocity/position switching or position/velocity switching by the external command signal is valid. Buffer memory address (Axis #1): 1505
Skip command	Indicates the skip command given in the program. Shows ● (ON) when the skip command is given. Buffer memory address (Axis #1): 1547

DISPLAY/SETTING SCREEN

[Velocity/position control monitor]


<Axis #1>Operation I/O : 0
Axis control data
Velocity/position control
Position/velocity control
OPR
JOG/MPG

Target speed 0.00 mm/min
Feed speed 0.00 mm/min
Current speed 0.00 mm/min
Movement amount after velocity/position switching on 0.0 um
Movement amount change register value 0.0 um
V/P switching latch flag ○
V/P switching enables flag ○
Velocity control flag ○

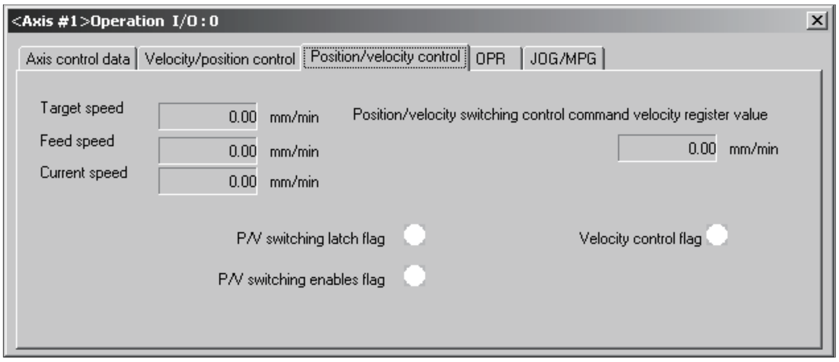
(Screen example: Axis #1 operation monitor screen)

DISPLAY/SETTING DATA

Item	Description
Target speed	Indicates the target speed for positioning data, OPR or JOG operation. For interpolation control, the composite speed or reference axis speed is displayed for the reference axis and 0 appears for the interpolation axis. Buffer memory address (Axis #1): 820, 821
Feed speed	Shows the speed of the axis operating actually in any operation. For interpolation control, the composite speed or reference axis speed is displayed for the reference axis and 0 appears for the interpolation axis. Buffer memory address (Axis #1): 804, 805
Current speed	Indicates the current speed. For interpolation control, the composite speed or reference axis speed is displayed for the reference axis and 0 appears for the interpolation axis. 0 appears for JOG operation or MPG operation. Buffer memory address (Axis #1): 810, 811
Movement amount after velocity / position switching ON	Indicates the travel distance under position control when velocity control is changed to position control during velocity/position switching control. Buffer memory address (Axis #1): 814, 815
Movement amount change register value	Indicates the value set to the velocity/position switching control travel correction register in the program. Buffer memory address (Axis #1): 1526, 1527
V/P switching latch flag	Indicates the velocity/position switching latch flag for the status signal. ● (ON) indicates that velocity control is switched to position control. Buffer memory address (Axis #1): 817 (b1)
V/P switching enable flag	Indicates the velocity/position switching enable flag set in the program. ● (ON) indicates that switching by the velocity/position switching signal is valid. Buffer memory address (Axis #1): 1528
Velocity control flag	Indicates the signal for differentiating between velocity control and position control. ● (ON) during velocity control. Buffer memory address (Axis #1): 817(b0)

DISPLAY/SETTING SCREEN

[Position/velocity control monitor]


<Axis #1>Operation I/O : 0
Axis control data
Velocity/position control
Position/velocity control
OPR
JOG/MPG

Target speed 0.00 mm/min
Feed speed 0.00 mm/min
Current speed 0.00 mm/min
Position/velocity switching control command velocity register value 0.00 mm/min
P/V switching latch flag ○
P/V switching enables flag ○
Velocity control flag ○

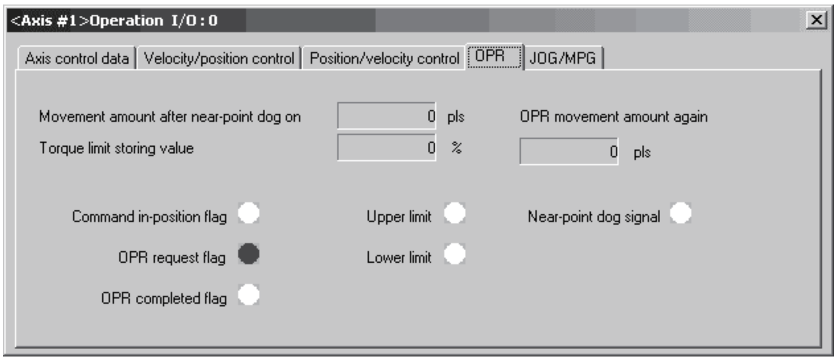
(Screen example: Axis #1 operation monitor screen)

DISPLAY/SETTING DATA

Item	Description
Target speed	Indicates the target speed for positioning data, OPR or JOG operation. For interpolation control, the composite speed or reference axis speed is displayed for the reference axis and 0 appears for the interpolation axis. Buffer memory address (Axis #1): 820, 821
Feed speed	Shows the speed of the axis actually operating in any operation. For interpolation control, the composite speed or reference axis speed is displayed for the reference axis and 0 appears for the interpolation axis. Buffer memory address (Axis #1): 804, 805
Current speed	For interpolation control, the composite speed or reference axis speed is displayed for the reference axis and 0 appears for the interpolation axis. 0 appears for JOG operation or MPG operation. Buffer memory address (Axis #1): 810, 811
Position/velocity switching control command velocity register value	Displays the contents of register which stores the position/velocity change control designated speed as set in the program. Buffer memory address (Axis #1): 1530, 1531
P/V switching latch flag	Indicates the position/velocity switching latch flag for the status signal. ● (ON) indicates that position control is switched to velocity control. Buffer memory address (Axis #1): 817 (b5)
P/V switching enable flag	Indicates the position/velocity switching enable flag set in the program. ● (ON) indicates that switching by the position/velocity switching signal is valid. Buffer memory address (Axis #1): 1532
Velocity control flag	Indicates the signal for differentiating between velocity control and position control. ● (ON) during velocity control. Buffer memory address (Axis #1): 817(b0)

DISPLAY/SETTING SCREEN

[OPR monitor]


<Axis #1>Operation I/O : 0
Axis control data
Velocity/position control
Position/velocity control
OPR
JOG/MPG

Movement amount after near-point dog on 0 pls
Torque limit storing value 0 %
OPR movement amount again 0 pls

Command in-position flag ○
OPR request flag ●
OPR completed flag ○
Upper limit ○
Lower limit ○
Near-point dog signal ○

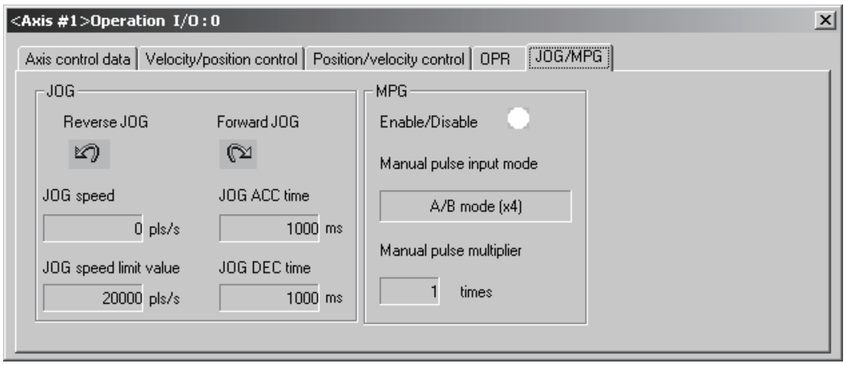
(Screen example: Axis #1 operation monitor screen displayed when the QD75M is chosen in model selection)

DISPLAY/SETTING DATA

Item	Description
Movement amount after near-point dog On	Indicates the travel distance of the axis during OPR from the position where the limit switch is turned on by the dog to the position where OPR is completed. Buffer memory address (Axis #1): 824, 825
Torque limit storing value	Shows the torque limit setting or torque change value. Buffer memory address (Axis #1): 826
OPR movement amount again	Indicates the movement amount when the axis is moved to the zero point by re-travel. This item is displayed only when the QD75M, QD75MH, or LD77 is selected in Select module type. Buffer memory address (Axis #1): 848, 849
Command in-position flag OPR request flag OPR completed flag	Displays the status signals related to OPR. ●: ON ○: OFF Buffer memory address (Axis #1): 817 (b2 : Command in-position flag, b3 : OPR request flag, b4 : OPR completed flag)
Lower limit Upper limit Zero phase signal Zeroing signal DDC signal	Shows the external I/O signals related to OPR. (The zero phase signal and DDC signal are displayed when the QD75P,QD75D or LD75 is selected in model selection.) ●: ON ○: OFF Buffer memory address (Axis #1): 816 (b0 : Lower limit, b1 : Upper limit, b5 : Zero phase signal, b6 : Zeroing signal, b8 : DDC signal)

DISPLAY/SETTING SCREEN

[JOG/MPG monitor]



<Axis #1>Operation I/O : 0

Reverse JOG:

Forward JOG:

JOG speed: 0 pls/s

JOG ACC time: 1000 ms

JOG speed limit value: 20000 pls/s

JOG DEC time: 1000 ms

Enable/Disable: ○

Manual pulse input mode: A/B mode (x4)

Manual pulse multiplier: 1 times

(Screen example: Axis #1 operation monitor screen)

DISPLAY/SETTING DATA

Item	Description
Foward JOG Reverse JOG	Indicates the direction during JOG operation in the program.
JOG speed	Indicates the axis speed during JOG operation in the program. Buffer memory address (Axis #1): 1518, 1519
JOG speed limit value	Indicates the JOG operation limit value set in the extended parameters 2. Buffer memory address (Axis #1): 48, 49
JOG ACC time JOG DEC time	Shows the acceleration time and deceleration time set in the extended parameters 2. Buffer memory address (Axis #1): 50 (JOG ACC time), 51 (JOG DEC time)
Enable/Disable	Shows if manual pulse operation is allowed or not. Permission setting in the test mode from the peripheral device is not displayed. Buffer memory address (Axis #1): 1524
Manual pulse input mode	Shows the MPG pulse input mode set in the extended parameters 1. Buffer memory address (Axis #1): 33
Manual pulse multiplier	Indicates the factor per MPG output pulse set in the program is multiplied by to find the number of input pulses. Buffer memory address (Axis #1): 1522, 1523

10.2.6 Servo monitor

PURPOSE

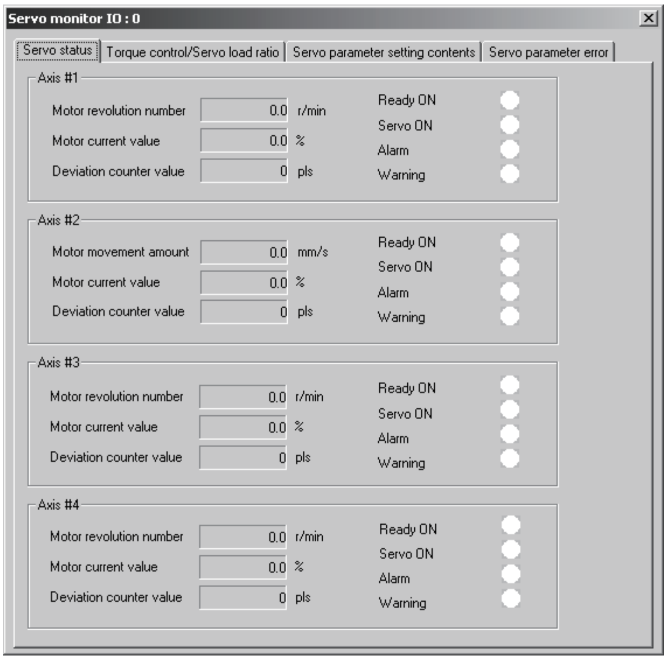
Monitor the servo status, torque control/servo load ratio, servo parameter setting contents and servo parameter error of the QD75M, QD75MH or LD77 during operation monitor.
With servo monitor, you can check the states and others of the servo amplifiers and servo motors connected to the QD75M, QD75MH or LD77.
For each monitor item, refer to the user's manual for the positioning module used and the instruction manuals of the servo amplifiers and servo motors used.

BASIC OPERATION

1. Perform the basic operation in Section 11.1.2 to display the operation monitor main screen.
2. Click the "Servo monitor" button on the operation monitor main screen.
3. Click the <<Servo status>> / <<Torque control/Servo load ratio>> / <<Servo parameter setting contents>> / <<Servo parameter error>> tab in the servo monitor dialog box.

DISPLAY/SETTING SCREEN

[Servo status]



Axis #1
Motor revolution number 0.0 r/min
Motor current value 0.0 %
Deviation counter value 0 pls

Axis #2
Motor movement amount 0.0 mm/s
Motor current value 0.0 %
Deviation counter value 0 pls

Axis #3
Motor revolution number 0.0 r/min
Motor current value 0.0 %
Deviation counter value 0 pls

Axis #4
Motor revolution number 0.0 r/min
Motor current value 0.0 %
Deviation counter value 0 pls

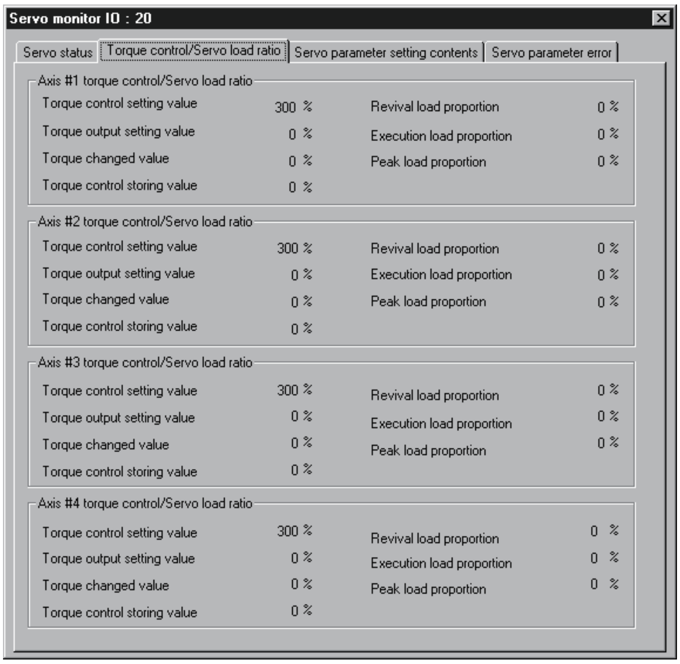
(Screen example: Axis #1 operation monitor screen displayed when the QD75M is chosen in model selection)

DISPLAY/SETTING DATA

Item	Description
Motor revolution number	Shows the servo motor speed. The unit is the number of revolutions per minute. Buffer memory address (Axis #1): 854, 855
Motor movement amount	Shows the movement amount of the servo motor. The unit is a movement amount per second. (For the MR-J3-B linear only) Buffer memory address (Axis #1): 854, 855
Motor current value	Shows the value of current to the servo motor. Buffer memory address (Axis #1): 856
Deviation counter value	Shows the errors of the feed present value and actual present value in terms of the number of deviation counter pulses. Buffer memory address (Axis #1): 852, 853
Servo status signals	Shows the servo status signals. ●: ON ○: OFF Buffer memory address (Axis #1): 877

DISPLAY/SETTING SCREEN

[Torque control/Servo load ratio]


Servo status
Torque control/Servo load ratio
Servo parameter setting contents
Servo parameter error

Servo monitor IO : 20

Axis #1 torque control/Servo load ratio
Torque control setting value 300 %
Torque output setting value 0 %
Torque changed value 0 %
Torque control storing value 0 %
Revival load proportion 0 %
Execution load proportion 0 %
Peak load proportion 0 %

Axis #2 torque control/Servo load ratio
Torque control setting value 300 %
Torque output setting value 0 %
Torque changed value 0 %
Torque control storing value 0 %
Revival load proportion 0 %
Execution load proportion 0 %
Peak load proportion 0 %

Axis #3 torque control/Servo load ratio
Torque control setting value 300 %
Torque output setting value 0 %
Torque changed value 0 %
Torque control storing value 0 %
Revival load proportion 0 %
Execution load proportion 0 %
Peak load proportion 0 %

Axis #4 torque control/Servo load ratio
Torque control setting value 300 %
Torque output setting value 0 %
Torque changed value 0 %
Torque control storing value 0 %
Revival load proportion 0 %
Execution load proportion 0 %
Peak load proportion 0 %

(Screen example: Axis #1 operation monitor screen displayed when the QD75M is chosen in model selection)

DISPLAY/SETTING DATA

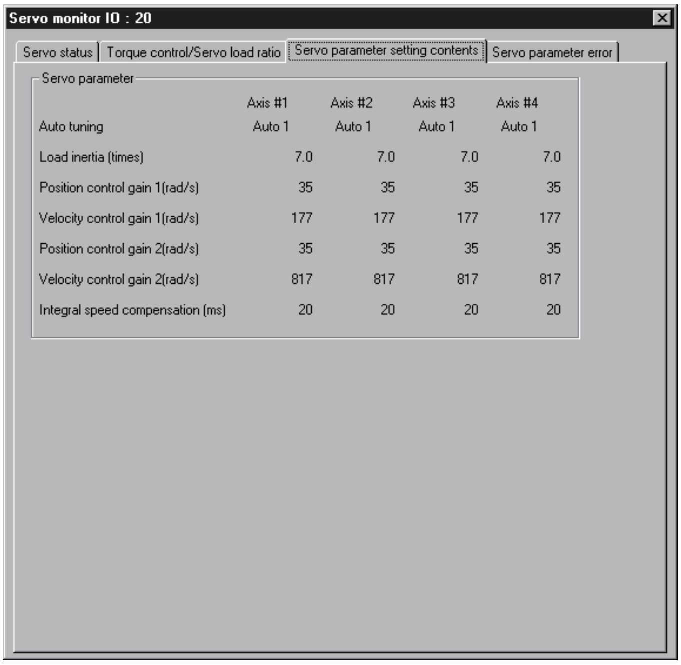
Item	Description
Torque control setting value	Shows the torque limit value set in the extended parameter 1 (refer to Section 8.1). Buffer memory address (Axis #1): 26
Torque output setting value	Shows the torque output value set in the program. Buffer memory address (Axis #1): 1552
Torque changed value	Shows the new torque value set in the program. Buffer memory address (Axis #1): 1525

Item	Description
Torque control storing value	Shows the torque limit value or new torque value valid for the running servo motor. Buffer memory address (Axis #1): 826
Revival load proportion	Shows the regenerative load factor relative the permissible value of the regenerative brake resistor selected in the servo basic parameter (refer to Section 8.2). Buffer memory address (Axis #1): 878
Execution load proportion	Shows the load factor relative to the rated torque. Buffer memory address (Axis #1): 879
Peak load proportion	Shows the peak load factor relative to the rated torque. Buffer memory address (Axis #1): 880

DISPLAY/SETTING SCREEN

(1) QD75M

[Servo parameter setting contents]

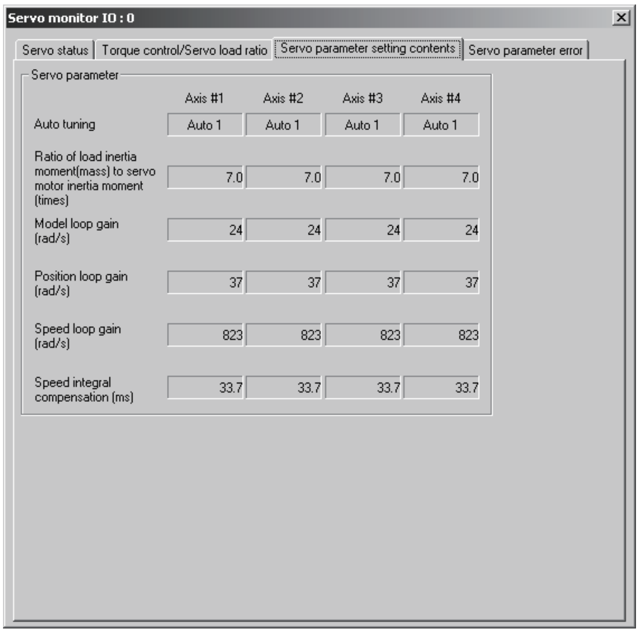

Servo monitor IO : 20
Servo status
Torque control/Servo load ratio
Servo parameter setting contents
Servo parameter error

Servo parameter

	Axis #1	Axis #2	Axis #3	Axis #4
Auto tuning	Auto 1	Auto 1	Auto 1	Auto 1
Load inertia (times)	7.0	7.0	7.0	7.0
Position control gain 1(rad/s)	35	35	35	35
Velocity control gain 1(rad/s)	177	177	177	177
Position control gain 2(rad/s)	35	35	35	35
Velocity control gain 2(rad/s)	817	817	817	817
Integral speed compensation (ms)	20	20	20	20

(2) QD75MH/LD77

[Servo parameter setting contents]



	Axis #1	Axis #2	Axis #3	Axis #4
Auto tuning	Auto 1	Auto 1	Auto 1	Auto 1
Ratio of load inertia moment(mass) to servo motor inertia moment (times)	7.0	7.0	7.0	7.0
Model loop gain (rad/s)	24	24	24	24
Position loop gain (rad/s)	37	37	37	37
Speed loop gain (rad/s)	823	823	823	823
Speed integral compensation (ms)	33.7	33.7	33.7	33.7

DISPLAY/SETTING DATA

(1) QD75M

Item	Description
Auto tuning Load inertia Position control gain1 Velocity control gain1 Position control gain2 Velocity control gain2 Integral speed compensation	Shows the auto tuning values set in the servo basic parameters (refer to Section 8.2) and the values of load inertia, each control gain and speed integral compensation set in the servo extended parameters (refer to Section8.2). When auto tuning is executed, the settings made according to the auto tuning results are displayed. Buffer memory address (Axis #1): 857, 858, 859, 860, 861, 862, 863

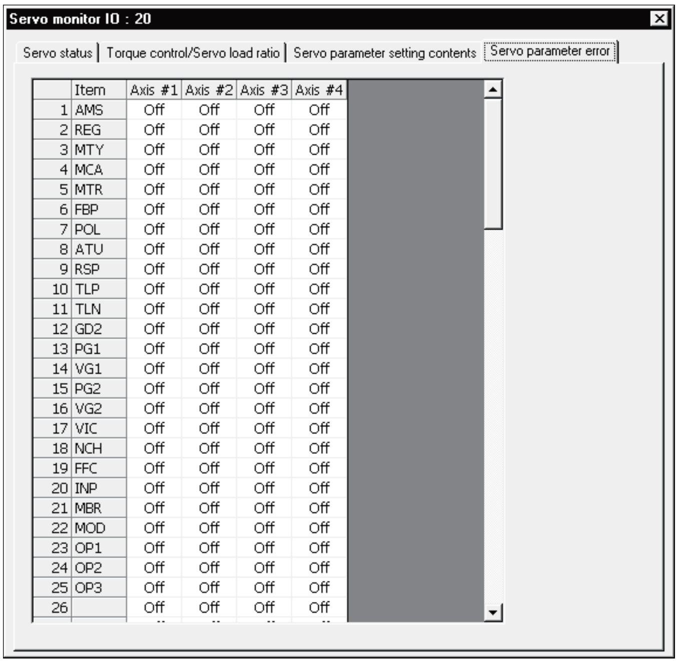
(2) QD75MH/LD77

Item	Description
Auto tuning Ratio of load inertia moment (mass) to servo motor inertia moment Model loop gain Position control gain Velocity control gain Integral speed compensation	Shows the auto tuning mode set in the servo basic parameters (refer to Section 8.2) and the values for the ratio of load inertia moment (mass) to servo motor inertia moment, each control gain and integral speed compensation set in the gain/filter parameters (refer to Section 8.2). When auto tuning is executed, the settings made according to the auto tuning results are displayed. Buffer memory address (Axis #1): 30108, 30124, 30125, 30126, 30127, 30128

DISPLAY/SETTING SCREEN

(1) QD75M

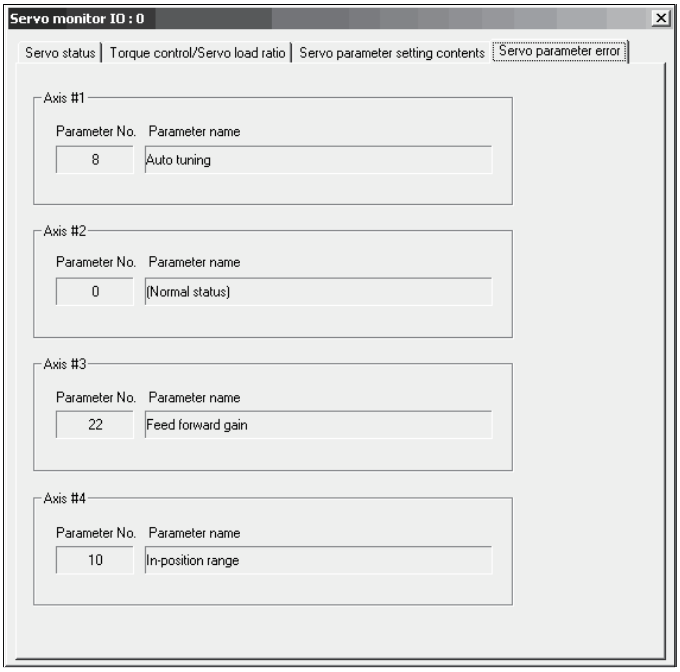
[Servo parameter error Monitor]


Servo monitor IO : 20
Servo status
Torque control/Servo load ratio
Servo parameter setting contents
Servo parameter error

	Item	Axis #1	Axis #2	Axis #3	Axis #4
1	AMS	Off	Off	Off	Off
2	REG	Off	Off	Off	Off
3	MTY	Off	Off	Off	Off
4	MCA	Off	Off	Off	Off
5	MTR	Off	Off	Off	Off
6	FBP	Off	Off	Off	Off
7	POL	Off	Off	Off	Off
8	ATU	Off	Off	Off	Off
9	RSP	Off	Off	Off	Off
10	TLP	Off	Off	Off	Off
11	TLN	Off	Off	Off	Off
12	GD2	Off	Off	Off	Off
13	PG1	Off	Off	Off	Off
14	VG1	Off	Off	Off	Off
15	PG2	Off	Off	Off	Off
16	VG2	Off	Off	Off	Off
17	VIC	Off	Off	Off	Off
18	NCH	Off	Off	Off	Off
19	FFC	Off	Off	Off	Off
20	INP	Off	Off	Off	Off
21	MBR	Off	Off	Off	Off
22	MOD	Off	Off	Off	Off
23	OP1	Off	Off	Off	Off
24	OP2	Off	Off	Off	Off
25	OP3	Off	Off	Off	Off
26		Off	Off	Off	Off

(2) QD75MH/LD77

[Servo parameter error Monitor]


Servo monitor IO : 0
Servo status
Torque control/Servo load ratio
Servo parameter setting contents
Servo parameter error

	Parameter No.	Parameter name
Axis #1	8	Auto tuning
Axis #2	0	(Normal status)
Axis #3	22	Feed forward gain
Axis #4	10	In-position range

DISPLAY/SETTING DATA

(1) QD75M

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Servo parameter error</td><td>Shows the servo parameter types and their error judgments.
No. indicates the lower 2 digits of the buffer memory address where the Axis #1 servo parameters of the QD75M are stored.
<table>
<tr><th>No.</th><th>Code</th><th>Servo Parameter</th><th>QD75M Servo Parameter Storage Buffer Memory Address (Axis #1)</th></tr>
<tr><td>1</td><td>AMS</td><td>Amplifier setting</td><td>101</td></tr>
<tr><td>2</td><td>REG</td><td>Regenerative brake option</td><td>102</td></tr>
<tr><td>3</td><td>MTY</td><td>Motor type</td><td>103</td></tr>
<tr><td>4</td><td>MCA</td><td>Motor capacity</td><td>104</td></tr>
<tr><td>•
•
•</td><td>•
•
•</td><td>•
•
•</td><td>•
•
•</td></tr>
</table>
Displays an error judgment per servo parameter item of each axis.
On: Error
Off: No error
Buffer memory address (Axis #1): 870, 871, 872, 873, 874</td></tr>
</table>

(2) QD75MH/LD77

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Servo parameter error</td><td>For each axis, shows parameter No. and name of the servo parameter in which an error has occurred.
Parameter No. is assigned in ascending order according to servo parameter No. of QD75MH.
<table>
<tr><th rowspan="2">Parameter No.</th><th colspan="2">Servo Parameter</th></tr>
<tr><th>No.</th><th>Parameter name.</th></tr>
<tr><td>1</td><td>PA01</td><td>Control mode</td></tr>
<tr><td>2</td><td>PA02</td><td>Regenerative brake option</td></tr>
<tr><td>3</td><td>PA03</td><td>Absolute position detection system</td></tr>
<tr><td>•
•
•</td><td>•
•
•</td><td>•
•
•</td></tr>
<tr><td>18</td><td>PA18</td><td>For manufacturer setting</td></tr>
<tr><td>19</td><td>PB01</td><td>Adaptive tuning mode (Adaptive filter II)</td></tr>
<tr><td>•
•
•</td><td>•
•
•</td><td>•
•
•</td></tr>
</table>
For details on servo parameters, refer to the user’s manual for the positioning module used and the instruction manuals of the servo amplifiers and servo motors used.
If there is no error, shows "0" for the parameter No. and "Normal state" for the parameter name.
Buffer memory address (Axis #1): 870</td></tr>
</table>

10.3 Sampling Monitor

Monitor the ON/OFF of any registered signals and the buffer memory values while simultaneously sampling them.

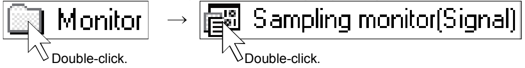
10.3.1 Sampling signal monitor

PURPOSE

You can monitor the ON/OFF of the specified X/Y devices, external I/O signals, status signals and servo status signals in the timing chart.

BASIC OPERATION

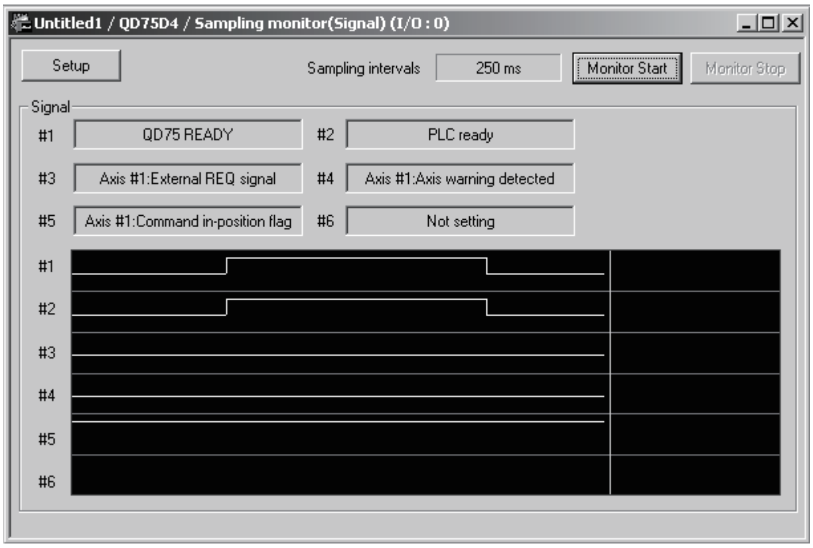
1. Choose Sampling monitor (signal).



2. Click the "Setup" button in the Sampling monitor (signal) window.
3. Set the signals in the Sampling monitor dialog box.
4. Click the [Online] → [Monitor] → [Monitor On/Off] menu ( ).
5. Check the monitor results.
6. To exit, click the [Online] → [Monitor] → [Monitor On/Off] menu ( ).

DISPLAY/SETTING SCREEN

[Sampling monitor (signal)]

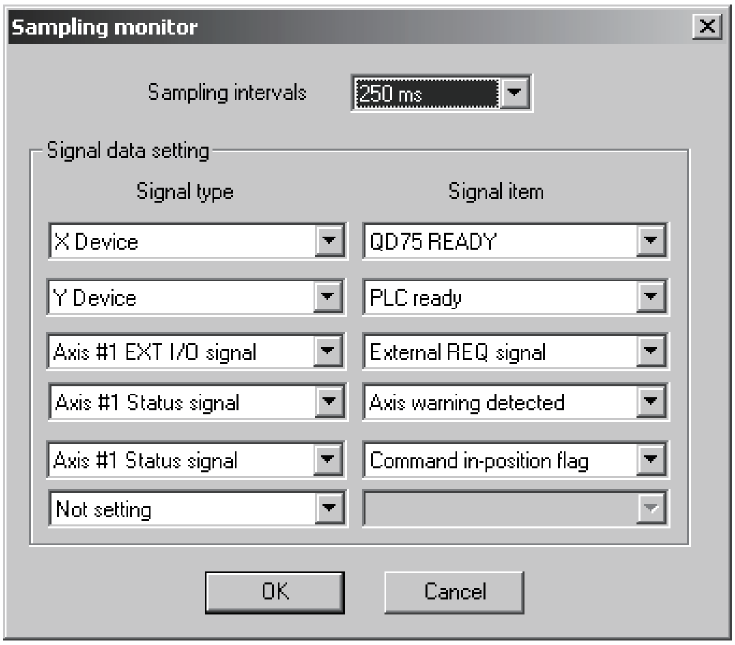


Untitled1 / QD75D4 / Sampling monitor(Signal) (I/O : 0)

Sampling intervals 250 ms

Signal
#1 QD75 READY
#2 PLC ready
#3 Axis #1:External REQ signal
#4 Axis #1:Axis warning detected
#5 Axis #1:Command in-position flag
#6 Not setting

[Sampling monitor dialog box]



Sampling intervals: 250 ms

Signal type	Signal item
X Device	QD75 READY
Y Device	PLC ready
Axis #1 EXT I/O signal	External REQ signal
Axis #1 Status signal	Axis warning detected
Axis #1 Status signal	Command in-position flag
Not setting	

DISPLAY/SETTING DATA

Item	Description
"Setup" button	Click this button to display the Sampling monitor dialog box.
Sampling monitor result	ON/OFF states are shown in the HIGH/LOW timing chart. The sampling cycle time changes with the sampling interval. The timing chart is enlarged or reduced according to the screen size.
Sampling intervals	Choose the sampling intervals from among "50ms", "100ms", "250ms", "500ms", "750ms".
Signal type	Choose the types of the sampled signals from the X Device, Y Device, EXT I/O signal, Status signal and Servo status signal.
Signal item	Choose the signals to be sampled.
"OK" button	Click this button to close the Sampling monitor dialog box and display the settings in the Sampling monitor (signal) window.

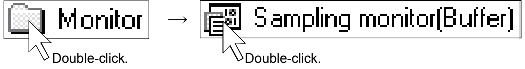
10.3.2 Sampling buffer monitor

PURPOSE

You can monitor the buffer memory storage values of the specified QD75/LD75/LD77 as waveform data.

BASIC OPERATION

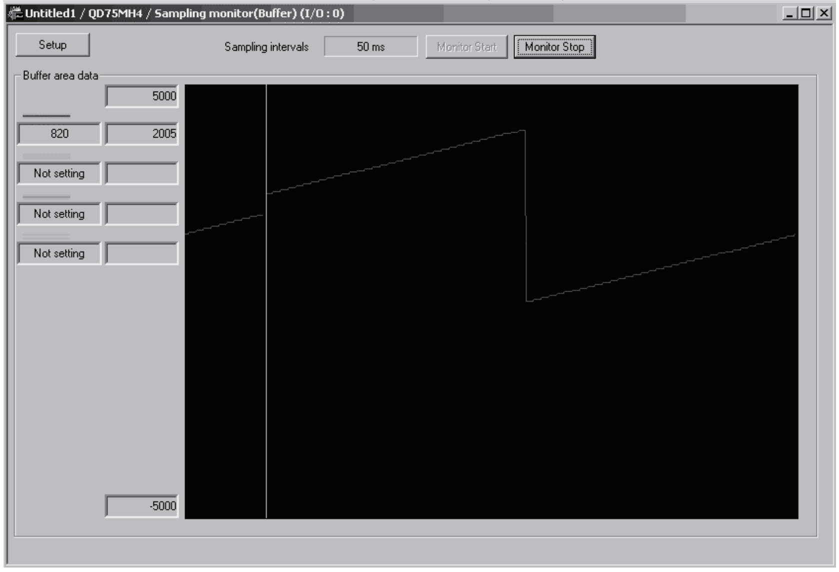
1. Choose Sampling monitor (Buffer).



2. Click the "Setup" button in the Sampling monitor (Buffer) window.
3. Set the buffer memory addresses, upper limit value and lower limit value in the Sampling Buffer area data setting dialog box.
4. Click the [Online] → [Monitor] → [Monitor On/Off] menu ( ).
5. Check the monitor results.
6. To exit, click the [Online] → [Monitor] → [Monitor On/Off] menu ( ).

DISPLAY/SETTING SCREEN

[Sampling monitor (Buffer)]



Untitled1 / QD75MH4 / Sampling monitor(Buffer) (I/O : 0)

Sampling intervals 50 ms

Buffer area data

5000

820 2005

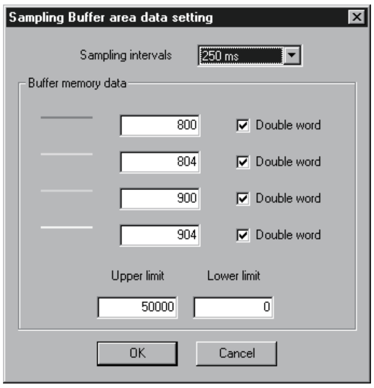
Not setting

Not setting

Not setting

-5000

[Sampling Buffer area data setting dialog box]



Sampling Buffer area data setting

Sampling intervals: 250 ms

Buffer memory data

800 ☑ Double word

804 ☑ Double word

900 ☑ Double word

904 ☑ Double word

Upper limit: 50000

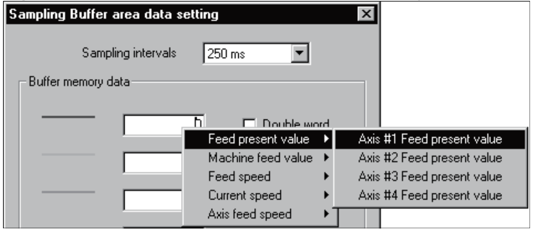
Lower limit: 0

DISPLAY/SETTING DATA

Item	Description
"Setup" button	Click this button to display the Sampling Buffer area data setting dialog box.
Sampling monitor result	Shows the buffer memory values as waveform data. The sampling cycle time changes with the sampling interval. The waveform data are enlarged or reduced according to the screen size.
Sampling intervals	Choose the sampling intervals from among "50ms", "100ms", "250ms", "500ms", "750ms".
Buffer area data	Set the QD75/LD75/LD77 buffer memory addresses and device sizes to be sampled. Click the unchecked check box when monitoring double word data such as the feed present value and feed speed. The setting range is buffer memory addresses 800 to 1499. The setting range for double-word data is 800 to 1498, and only even addresses may be set. Set to 0 when not performing sampling.
Upper limit Lower limit	Set the upper and lower limit values to be displayed as waveform data. The waveform data near the upper limit value may not appear when the sampling screen is redisplayed by switching the windows, for example. In that case, set the upper limit value to a value larger than the sampled value, and also change the lower limit value to reduce the difference between the upper and lower limit values.
"OK" button	Click this button to close the Sampling Buffer area data setting dialog box and display the settings in the Sampling monitor (Buffer) window.

HELPFUL OPERATION

If you do not know the buffer memory addresses of the QD75/LD75/LD77, you can set them by the following operation.
Right-click the text box in the Sampling Buffer area data setting dialog box.
The buffer memory addresses and device sizes of the data selected from the right-click menu are set automatically.



Sampling Buffer area data setting

Sampling intervals: 250 ms

Buffer memory data

☐ Double word

Feed present value
Machine feed value
Feed speed
Current speed
Axis feed speed
Axis #1 Feed present value
Axis #2 Feed present value
Axis #3 Feed present value
Axis #4 Feed present value

Point

If sampling is performed while "Double word" is set for "Buffer memory data", acquired data may be separated.

10.4 Test

Place the QD75/LD75/LD77 in the test mode during operation monitor, and test the positioning start, present value change, speed change, OPR, JOG or MPG operation. Each operation of the QD75P/QD75D/LD75 can be tested in the cableless mode using its module alone.

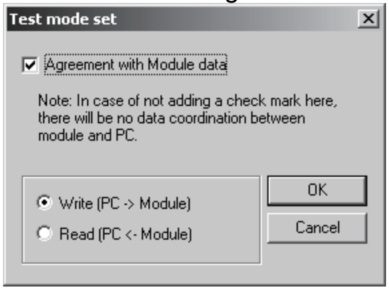
⚠ CAUTION

- Before performing the OPR, JOG operation, positioning data or other test in the test mode, read the manual carefully, fully ensure safety, and set the programmable controller CPU to STOP.
  Incorrect operations can damage the machine or cause an accident.

(1) Test mode ON operation

Perform the following operation to place the QD75/LD75/LD77 in the test mode.

1. Set the required project as the active project.
   Refer to Section 5.2 for the active project setting.
2. Click the [Online] → [Test] → [Test On/Off] menu ( ).
3. Click the "Yes" button in the all displayed window closing confirmation dialog box.
4. Click unchecked "Agreement with Module data" in the following dialog box.



Test mode set

☑ Agreement with Module data

Note: In case of not adding a check mark here, there will be no data coordination between module and PC.

● Write (PC -> Module)
○ Read (PC <- Module)

5. Choose Write or Read and click the "OK" button.
   Refer to Section 9.1 for writing to and reading from the positioning module.
6. Click the "OK" button in the test mode confirmation dialog box.
7. To exit from the test mode, click the [Online] → [Test] → [Test On/Off] menu( ).

Point

(1) When conducting a test in the cableless mode, you cannot perform start, velocity/position switching and position/velocity switching under the control of external input signals and OPR which requires near point dogs and zero phase signal.
Since the feed present value cannot be cleared by OPR, make the present value change test (refer to Section 10.4.2) to clear it.

(2) If an error occurred due to cable disconnection during a test in the wiring-less mode, an attempt to shift to the test mode again after cable reconnection may display the dialog box "The module is already under TEST MODE." In this case, shift to the test mode after resetting the programmable controller CPU.

(3) In the test mode, JOG or other operation may respond slower depending on the running condition of the personal computer.
In such a case, take the following actions.
- Close all applications except GX Configurator-QP so that they are not run concurrently.
- Set the transmission speed to 38.4kbps or higher in Connection Setup (refer to Section 7.1).

HELPFUL OPERATION

Perform the following operation when you want to test the positioning data or block start data before installing external equipment such as the servo amplifiers and motors.

1. Click the [Online] → [Test] → [Cableless mode] menu.
2. Choose the test mode by performing the above operation.
3. The operation that will follow is the same as in the corresponding test. Refer to the corresponding pages.
4. To finish, exit from the test mode and click the [Online] → [Test] → [Cableless mode] menu.

10.4.1 Positioning start test

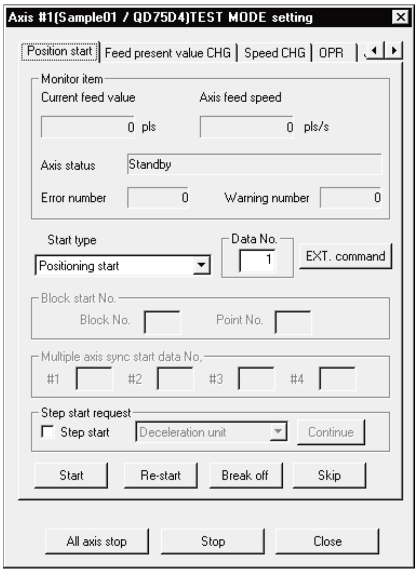
PURPOSE

Specify the positioning data No. or block start data point No. and perform test operation.

BASIC OPERATION

1. Put the QD75/LD75/LD77 in the test mode in accordance with Section 10.4 (1).
2. Click the [Online] → [Test] → [Operation test] → [Operation test #1 to #4] menu (⚒1 to ⚒4).
3. Click the <<Position start>> tab in the TEST MODE setting dialog box.
4. Make external command setting when enabling velocity/position switching or position/velocity switching under the control of external command signal.
5. Choose Start mode.
6. Set Data No. or Block start No. and multiple axis sync start data No. according to Start mode.
7. When using a step start to perform test operation, click the unchecked "Step Start" check box to choose the step start type.
8. Clicking the "Start" button starts test operation from the specified positioning data or point.
9. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN



Axis #1(Sample01 / QD75D4)TEST MODE setting

Current feed value: 0 pls

Axis feed speed: 0 pls/s

Axis status: Standby

Error number: 0

Warning number: 0

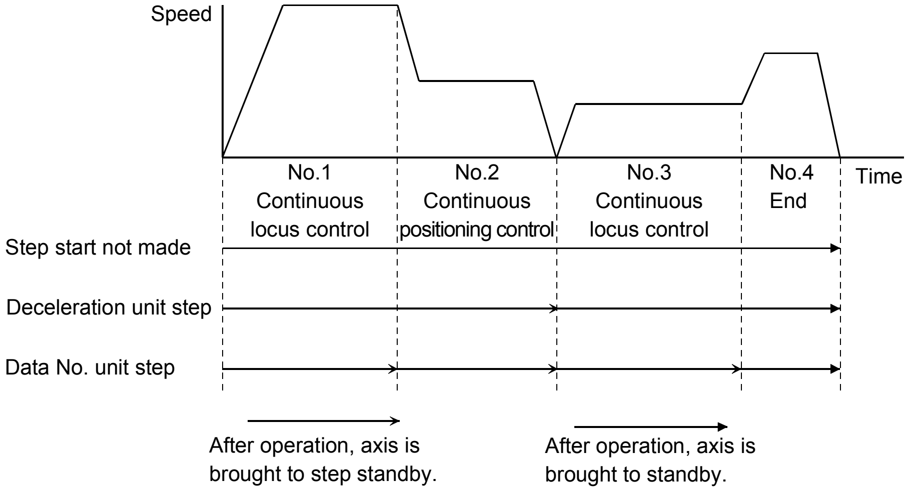
Start type: Positioning start

Data No.: 1

Deceleration unit

DISPLAY/SETTING DATA

Item	Description
Monitor item	Shows the axis status.
Start type	Choose the start mode of test operation. • Positioning start Test operation is started from the specified positioning data No. • Block start Test operation is started from the specified block point No. • Multiple axis sync start Test operation is started from the positioning data No. specified per axis.
Data No.	Set the positioning data No. for the positioning start mode.
Block No.	Set the block No. for the block start mode.
Point No.	Set the point No. for the block start mode.
Multiple axis sync start data No.	Set the positioning data No. to each axis for the multiple axis sync start mode.
"EXT. command" button	Clicking this button shows the external command dialog box and allows you to set external command enable, velocity/position switching enable or position/velocity switching enable.
"Continue" button	Click this button during step standby to make a step start from the next positioning data No.
"Start" button	Click this button to start test operation from the preset positioning data No. or point No.
"Re-start" button	Click this button during an axis stop to resume test operation from the stop position.
"Break off" button	Click this button to suspend positioning control during test operation.
"Skip" button	Click this button at a step start to skip over continuous positioning control or continuous locus control to the next positioning data. Skip is valid up to the positioning data next to the end of the operation pattern.

Item	Description
Step start request	When performing a step start, click the unchecked step start check box. When you made it valid, choose the step start type. • Data No. units Independently of the operation pattern, operation is started from the specified positioning data No., and is performed and brought to a step standby status per data. • Deceleration units When the operation pattern is continuous locus control, test operation is performed up to continuous positioning control or the last positioning data.  Speed Time No.1 Continuous locus control No.2 Continuous positioning control No.3 Continuous locus control No.4 End Step start not made Deceleration unit step Data No. unit step After operation, axis is brought to step standby. After operation, axis is brought to standby.
"All axis stop" button	Click this button to stop all axes.
"Stop" button	Click this button to stop the axis. Clicking the "Re-start" button resumes test operation from the stop position.
<<Feed present value CHG>> tab <<Speed CHG>> tab <<OPR>> tab <<JOG/MPG>> tab	Click the tab to show the corresponding test screen. Present value change test .... Refer to Section 10.4.2. Speed change test .... Refer to Section 10.4.3. OPR test .... Refer to Section 10.4.4. JOG/MPG test .... Refer to Section 10.4.5.

10.4.2 Present value change test

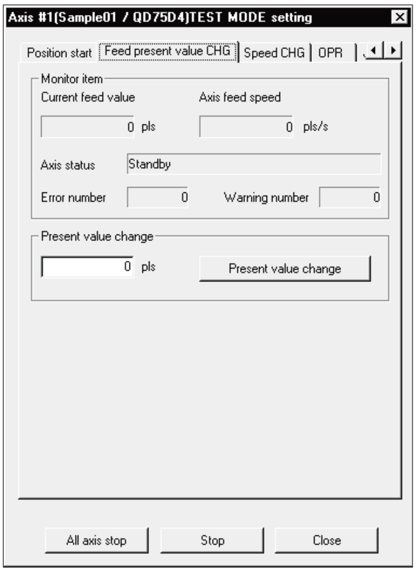
PURPOSE

Change the feed present value of the QD75/LD75/LD77 to the specified address.

BASIC OPERATION

1. Place the QD75/LD75/LD77 in the test mode in accordance with Section 10.4 (1).
2. Click the [Online] → [Test] → [Operation test] → [Operation test #1 to #4] menu (to).
3. Click the <<Feed present value CHG>> tab in the TEST MODE setting dialog box.
4. Type a new value in the text box and click the "Present value change" button.
5. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN



Axis #1(Sample01 / QD75D4)TEST MODE setting

Current feed value: 0 pls

Axis feed speed: 0 pls/s

Axis status: Standby

Error number: 0

Warning number: 0

Present value change: 0 pls

DISPLAY/SETTING DATA

Item	Description
Monitor item	Shows the axis status.
Present value change	Set a new feed present value.
"Present value change" button	Click this button to change the present value.
"All axis stop" button	Click this button to stop all axes.
"Stop" button	Click this button to stop the axis.
<<Position start>> tab <<Speed CHG>> tab <<OPR>> tab <<JOG/MPG>> tab	Click the tab to show the corresponding test screen. Positioning start test........Refer to Section 10.4.1. Speed change test..........Refer to Section 10.4.3. OPR test..........................Refer to Section 10.4.4. JOG/MPG test.................Refer to Section 10.4.5.

10.4.3 Speed change test

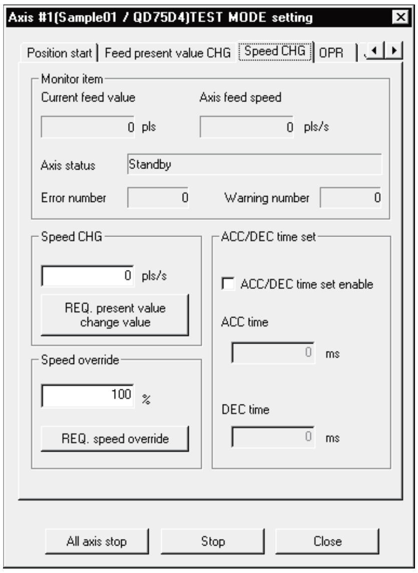
PURPOSE

Make a speed and/or acceleration/deceleration time change to the axis operating in the positioning start, OPR or JOG operation test to check the adequate speed and/or acceleration/deceleration time.

BASIC OPERATION

1. Place the QD75/LD75/LD77 in the test mode in accordance with Section 10.4 (1).
2. Click the [Online] → [Test] → [Operation test] → [Operation test #1 to #4] menu (to).
3. Perform positioning start test (refer to Section 10.4.1), OPR test (refer to Section 10.4.4) or JOG/MPG operation test (refer to Section 10.4.5) in the TEST MODE setting dialog box.
4. Click the <<Speed CHG>> tab in the TEST MODE setting dialog box.
5. When changing the acceleration/deceleration time, click the unchecked "ACC/DEC time set enable" check box and set the acceleration/deceleration time.
6. Make a speed change test on the running axis.
7. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN



Current feed value: 0 pls

Axis feed speed: 0 pls/s

Axis status: Standby

Error number: 0

Warning number: 0

Speed CHG: 0 pls/s

Speed override: 100 %

☐ ACC/DEC time set enable

ACC time: 0 ms

DEC time: 0 ms

DISPLAY/SETTING DATA

Item	Description
Monitor item	Shows the axis status.
Speed CHG	Set a new speed to replace the command speed, OPR speed or JOG operation speed of the running axis. The speed limit value is changed if the value is greater than the speed limit value set in basic parameters 2.
"REQ. present value change value" button	Click this button to change the speed.
Speed override	Set the multiplying factor (%) of the speed overriding the command speed, OPR speed or JOG operation speed. Override also influences the new speed resulting from speed change. The override value once executed is valid during the test mode. The setting range is 1 to 300%.
"REQ. speed override" button	Click this button to execute override. Clicking this button in the standby status of the axis makes the override speed valid at the next start. A speed change is also made when this button is clicked for the running axis.
"ACC/DEC time set enable" check box	Used to set whether an acceleration/deceleration time change is enabled or disabled at a speed change. Click the unchecked check box to change the acceleration/deceleration time when a speed change is made.
ACC time DEC time	Set the acceleration time and deceleration time to be changed as soon as a speed change is made. When "ACC/DEC time set enable" is disabled (not checked), the setting is invalid.
"All axis stop" button	Click this button to stop all axes.
"Stop" button	Click this button to stop the axis.
<<Position start>> tab <<Feed present value CHG>> tab <<OPR>> tab <<JOG/MPG>> tab	Click the tab to show the corresponding test screen. Positioning start test.....................Refer to Section 10.4.1. Present value change test ....Refer to Section 10.4.2. OPR test......................................Refer to Section 10.4.4. JOG/MPG test.............................Refer to Section 10.4.5.

10.4.4 OPR test

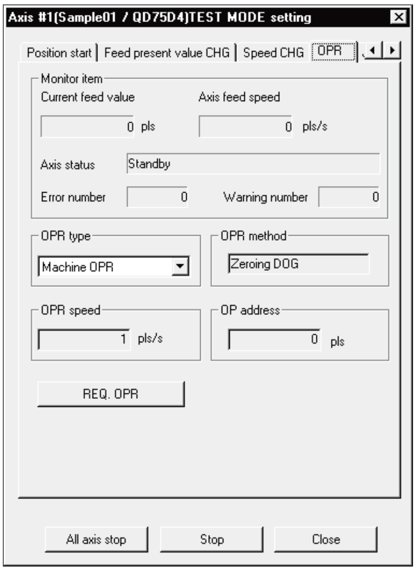
PURPOSE

Perform an OPR test to set up an original point and correct the preset OPR basic parameters and OPR extended parameters.

BASIC OPERATION

1. Place the QD75/LD75/LD77 in the test mode in accordance with Section 10.4 (1).
2. Click the [Online] → [Test] → [Operation test] → [Operation test #1 to #4] menu (to).
3. Click the <<OPR>> tab in the TEST MODE setting dialog box.
4. Check the OPR method, OPR speed and Original point address.
5. Choose the OPR type and click the "REQ. OPR" button.
6. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN


Axis #1(Sample01 / QD75D4)TEST MODE setting

Monitor item
Current feed value: 0 pls
Axis feed speed: 0 pls/s
Axis status: Standby
Error number: 0
Warning number: 0

OPR type: Machine OPR
OPR method: Zeroing DOG
OPR speed: 1 pls/s
OP address: 0 pls

DISPLAY/SETTING DATA

Item	Description
Monitor item	Shows the axis status.
OPR type	Chose the type of a starting method used in the OPR test. • Machine OPR OPR is performed using the dog or zero phase signal depending on the OPR method. Performed when the original point is set up. • High speed OPR Operation of positioning to the original point is performed in the travel distance calculated from the mechanical feed distance and the original point address set to the OPR basic parameters after the original point has been set up.
"REQ. OPR" button	Click this button to start OPR set for the OPR method.
OPR method OPR speed OP address	Show the data set in the OPR basic parameters.
"All axis stop" button	Click this button to stop all axes.
"Stop" button	Click this button to stop the axis.
<<Position start>> tab <<Feed present value CHG>> tab <<Speed CHG>> tab <<JOG/MPG>> tab	Click the tab to show the corresponding test screen. Positioning start test........................Refer to Section 10.4.1. Present value change test ....Refer to Section 10.4.2. Speed change test ....Refer to Section 10.4.3. JOG/MPG test.................................Refer to Section 10.4.5.

HELPFUL OPERATION

The following operation example is given for original point setup when the OPR method is the count type 2).

1. Perform steps 1 to 5 in BASIC OPERATION in this section to make an OPR test of the machine OPR type.
2. If there is a difference between the position of the original point set up in the OPR test and the expected position, perform JOG/MPG operation test(refer to Section 10.4.5) to correct the position.
3. Check the difference between the feed present value and original point address.
4. Make correction of the difference to “Travel distance after DOG” in the OPR extended parameters.

10.4.5 JOG/MPG operation test

PURPOSE

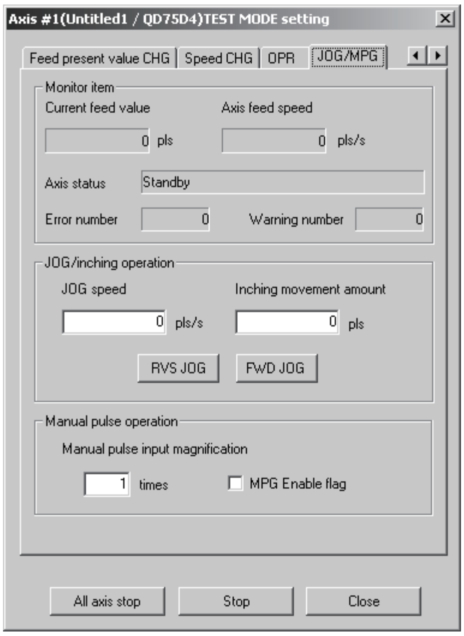
When debugging positioning control by JOG or MPG operation, you can conduct the following tests.

- Forward/reverse direction checking
- Checking of the ON/OFF of the external input signals such as upper/lower limit switch, zero phase and dog signals
- Speed and acceleration/deceleration operation tests
- Measurement of backlash compensation by forward or reverse operation
- Measurement of accurate addresses and travel distances

BASIC OPERATION

1. Place the QD75/LD75/LD77 in the test mode in accordance with Section 10.4 (1).
2. Click the [Online] → [Test] → [Operation test] → [Operation test #1 to #4] menu (to).
3. Click the <<JOG/MPG>> tab in the TEST MODE setting dialog box.
4. When performing JOG operation, set "1" or more for JOG velocity and "0" for Inching value, and press the "FWD JOG" or "RVS JOG" button.
5. When performing inching operation, set the inching travel value and press the "FWD JOG" or "RVS JOG" button.
6. When performing MPG operation, set the MPG input magnification, click unchecked MPG Enable flag, and use the manual pulse generator.
7. To exit, click the "Close" button.

DISPLAY/SETTING SCREEN


Axis #1(Untitled1 / QD75D4)TEST MODE setting

Monitor item

Current feed value: 0 pls

Axis feed speed: 0 pls/s

Axis status: Standby

Error number: 0

Warning number: 0

JOG/inching operation

JOG speed: 0 pls/s

Inching movement amount: 0 pls

Manual pulse operation

Manual pulse input magnification: 1 times

☐ MPG Enable flag

DISPLAY/SETTING DATA

Item	Description
Monitor item	Shows the axis status.
JOG speed	Set the speed for JOG operation. You cannot set any value beyond the JOG speed limit. JOG speed is ignored for inching operation.
Inching movement amount	Set the movement amount for inching operation. Set "0" for JOG operation.
"FWD JOG" button "RVS JOG" button	Set the mouse pointer to the required arrow and press the left button of the mouse or press the space key to start JOG operation. • When inching value is "1" or more Every time you press the button, the pulse equivalent to the inching value is output. Acceleration/deceleration processing is not performed. • When inching value is "0" Hold down the left button of the mouse or the space key to continue operation at the specified JOG speed. The movement amount increments by one unit (mm, degree, inch, pulse). When the axis motion direction is opposite, change the rotation direction setting in basic parameters 1.
Manual pulse input magnification	Set the multiplying factor per pulse input from the manual pulse generator for MPG operation.
"MPG Enable flag" check box	Check this flag to enable MPG operation in the test mode.
"All axis stop" button	Click this button to stop all axes.
"Stop" button	Click this button to stop the axis.
<<Position start>> tab <<Feed present value CHG>> tab <<Speed CHG>> tab <<OPR>> tab	Click the tab to show the corresponding test screen. Positioning start test....................Refer to Section 10.4.1. Present value change test ....Refer to Section 10.4.2. Speed change test ....Refer to Section 10.4.3. OPR test......................................Refer to Section 10.4.4.

Point

The inching value is at the given ratio of the JOG speed limit value, and an error will occur if it is greater than the value calculated by the following expression.

- Unit setting of "mm"
  JOG speed limit value (mm/min) × 0.00295 = inching value (μm)
- Unit setting of "inch" or "degree"
  JOG speed limit value (inch/min, degree/min) × 0.0000295 = inching value (inch, degree)
- Unit setting of "pulse"
  JOG speed limit value (pls) × 0.00177 = inching value (pls)

10.5 Servo On/Off

PURPOSE

In the test mode of the QD75M, QD75MH or LD77 switch off the electromagnetic brake of the servo motor to coast the motor.

Point

The following conditions must be satisfied to switch servo On/Off.

<Servo On>

- The servo amplifier of the corresponding axis is in the ready On status and servo Off status.
- The corresponding axis is in other than the error occurrence/step error occurrence status.

<Servo Off>

- The servo amplifier of the corresponding axis is in the servo Off status.
- The corresponding axis is in the standby/stop/step standby status.

BASIC OPERATION

1. Choose the [Online] → [Test] → [Test On/Off] menu ( ) to place the QD75M, QD75MH or LD77 in the test mode.
2. To put all axes in the servo Off status simultaneously, click the [Online] → [Test] → [All axis Servo On/Off] menu.
   To switch servo Off axis-by-axis, click the [Online] → [Test] → [Tool] → [#1 Servo Off command] / [#2 Servo Off command] / [#3 Servo Off command] / [#4 Servo Off command] menu.
3. To switch servo On, click the [Online] → [Test] → [All axis Servo On/Off] menu.

11. USEFUL FUNCTIONS

Out of the functions that can be performed on GX Configurator-QP, this chapter describes the functions and operations useful for project execution, positioning data setting, etc. and the functions which support settings.
This chapter also explains the teaching function which imports the feed present value to the address, the function which writes positioning data in the test mode, the function which prints project setting data, and the trace function which displays operation results as waveform/locus data.

11.1 Useful Functions for Projects

This section describes the functions and operations which are helpful for utilizing project data to create projects and for changing set data.

11.1.1 Verifying the project data

PURPOSE

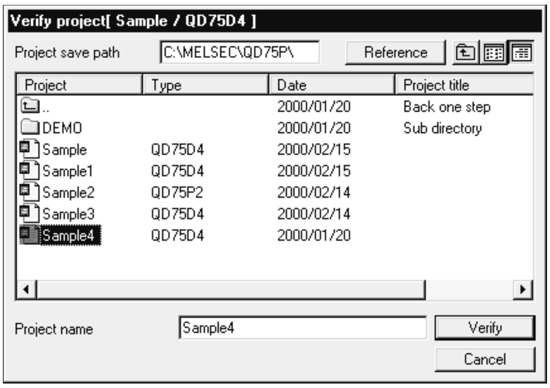
Compare and verify the parameters, servo parameters, positioning data, block start data and condition data of the project set as the active project and the saved project.

BASIC OPERATION

1. Set the verify source project as the active project. (Refer to Section 5.2.)
2. Click the [Project] → [Verify Project] menu ( ).
3. Choose the verify target project in the Verify project dialog box (1) and click the "Verify" button.
4. Set the types and ranges of the data to be verified in the Verify project dialog box (2).
5. Click the "OK" button.
6. Check the results in the Verify result dialog box.

DISPLAY/SETTING SCREEN

[Verify project dialog box (1)]



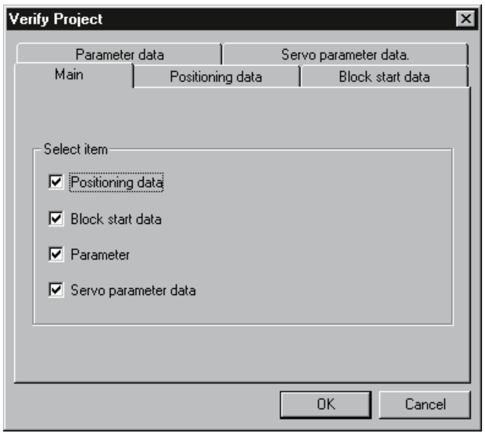
Verify project[Sample / QD75D4]

Project save path: C:\MELSEC\QD75P\

Project	Type	Date	Project title
..		2000/01/20	Back one step
DEMO		2000/01/20	Sub directory
Sample	QD75D4	2000/02/15	
Sample1	QD75D4	2000/02/15	
Sample2	QD75P2	2000/02/14	
Sample3	QD75D4	2000/02/14	
Sample4	QD75D4	2000/01/20	

Project name: Sample4

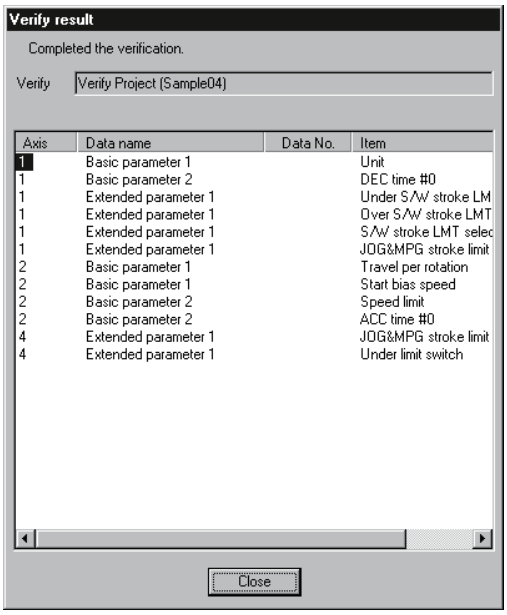
[Verify project dialog box (2)]



Select item

☑ Positioning data
☑ Block start data
☑ Parameter
☑ Servo parameter data

[Verify result dialog box]



Completed the verification.

Verify: Verify Project (Sample04)

Axis	Data name	Data No.	Item
1	Basic parameter 1		Unit
1	Basic parameter 2		DEC time #0
1	Extended parameter 1		Under S/W stroke LM
1	Extended parameter 1		Over S/W stroke LMT
1	Extended parameter 1		S/W stroke LMT selec
1	Extended parameter 1		JOG&MPG stroke limit
2	Basic parameter 1		Travel per rotation
2	Basic parameter 1		Start bias speed
2	Basic parameter 2		Speed limit
2	Basic parameter 2		ACC time #0
4	Extended parameter 1		JOG&MPG stroke limit
4	Extended parameter 1		Under limit switch

DISPLAY/SETTING DATA

Item	Description
Project name	Click the project name of the verify destination.
Project save path	Shows the project save path of the verify destination.
"Reference" button	Click this button to display the Project tree dialog box (refer to Section 6.1).
"Verify" button	Click this button to show the Verify project dialog box (2).
Verify project dialog box (2)	Set the types and ranges of the data to be verified.
Verify result dialog box	Shows up to 100 different settings between the project set as the active project and the specified project. If the number of mismatches exceeds 100, verify processing is suspended as soon as the number of mismatches reaches 100.

11.1.2 Changing the model after data setting

PURPOSE

Change the QD75 model after setting the parameters, positioning data or other data.

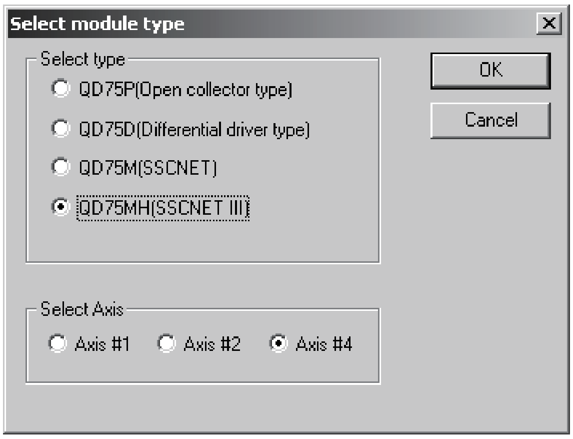
If you choose "New Project read to module" in New Project, the model is the same as the QD75 at the read destination. Therefore, when utilizing the data for the other model, change the QD75 model after completion of read.

(Note that a model cannot be changed in LD75 and LD77 projects, and cannot be changed to LD75 or LD77 in QD75 projects.)

BASIC OPERATION

1. Set the required project as the active project. (Refer to Section 5.2.)
   If in the monitor or test mode, choose the offline status.
2. Click the [Project] → [Change module type] menu.
3. To close the screen being displayed, click the "OK" button in the confirmation dialog box.
4. Choose a new model in the Select module type dialog box.
5. Click the "OK" button.

DISPLAY/SETTING SCREEN



Select module type

Select type
○ QD75P(Open collector type)
○ QD75D(Differential driver type)
○ QD75M(SSCNET)
● QD75MH(SSCNET III)

Select Axis
○ Axis #1 ○ Axis #2 ● Axis #4

DISPLAY/SETTING DATA

Item	Description
Select type	Choose the model (type with the exception of the axis number) of the QD75.
Select Axis	Choose the number of axes of the QD75.
"OK" button	Click this button to change the model.

Point

- Note that the model of MELSEC-Q series positioning module cannot be changed to that of MELSEC-L series.
- Independent of the QD75 model selected for the project, all data that can be set in the edit mode are saved in the project.
  In a new project whose number of axes is 1, the parameters, positioning data, block start data, etc. of undisplayed Axis 2 to Axis 4 are saved. (However, the data of Axis 2 to Axis 4 are initial values.)
  When the project whose number of axes is 4 is saved after changing to a model for 1 or 2 axes, the data of Axis 3/Axis 4 is saved unchanged.
  Therefore, the model can be changed without restriction on the model selected when a new project is created.
- Depending on the combination of QD75 models, data may not be converted as shown in the following table.

Conversion source	Conversion destination			
	QD75P	QD75D	QD75M	QD75MH
QD75P	○	○	△	△
QD75D	○	○	△	△
QD75M	△	△	○	▲
QD75MH	△	△	▲	○

○: Conversion available
△: Conversion is available for positioning data and block start data only.
As default values are set to parameters and servo parameters resetting is required.
▲: Conversion is available for positioning data, block start data and parameter only. As default values are set to servo parameters, resetting is required.

11.1.3 Intelligent function utility

PURPOSE

Make setting to read the following data automatically from the QD75/LD75/LD77 buffer memory to the QCPU/LCPU devices (e.g. data registers).

The set data are stored in the intelligent function module parameters of the GX Developer project.

- Feed present value
- Error No.
- Axis operating status
- Machine feed value
- Warning No.
- Feed speed
- Enable M code

Auto refresh allows the above data of the QD75/LD75/LD77 to be imported to the QCPU/LCPU without creation of a program.

BASIC OPERATION

1. Set the required project as the active project. (Refer to Section 5.2.)
2. Click the [Tool] → [Intelligent function utility] menu.
3. Choose the target GX Developer project in the GX Developer project dialog box.
4. The intelligent function module utility starts.
5. Set Start I/O No., Package name and Module model name.
6. Click the "Auto refresh" button.
7. Assign the programmable controller CPU side devices to the auto refresh items in the Auto refresh setting dialog box.
8. Click the "End setup" button.
9. Click the "Exit" button in the Intelligent function module utility.
10. Click the "Yes" button in the intelligent function module parameter save confirmation dialog box.

The intelligent function module utility can be started to execute the auto refresh setting in GX Developer.

To start the intelligent function module utility in GX Developer, click [Tools] → [Intelligent function utility] menu → "Auto refresh" button.

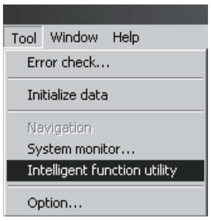
Then, follow the above procedure of the basic operation from 5 to 10 to set the auto refresh.

DISPLAY/SETTING SCREEN

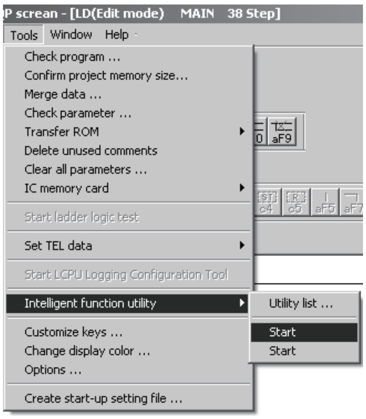
For starting the intelligent function module utility with GX Configurator-QP

For starting the intelligent function module utility with GX Developer

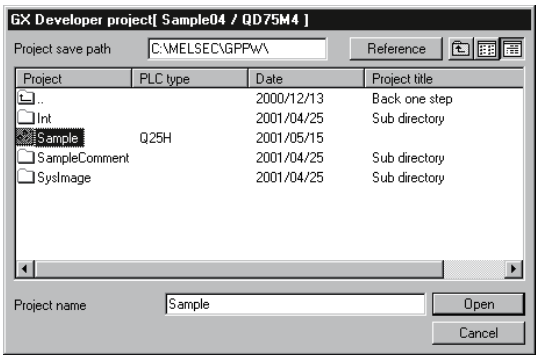
[GX Configurator-QP screen]



[GX Developer screen]



[GX Developer project dialog box]

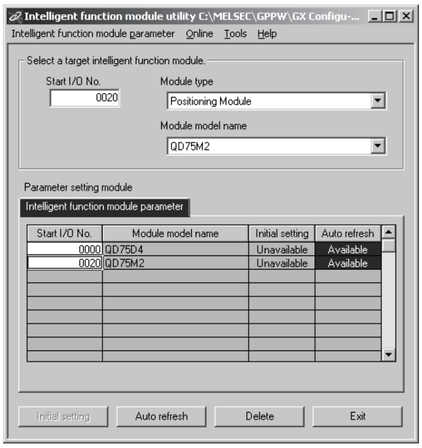


Project save path: C:\MELSEC\GPPW\

Project	PLC type	Date	Project title
..		2000/12/13	Back one step
Int		2001/04/25	Sub directory
Sample	Q25H	2001/05/15	
SampleComment		2001/04/25	Sub directory
SysImage		2001/04/25	Sub directory

Project name: Sample

[Intelligent function module utility]


Intelligent function module utility C:\MELSEC\GPPW\GX Configu-...
Intelligent function module parameter
Online
Tools
Help
Intelligent function module parameter
Initial setting
Auto refresh
Delete
Exit

Select a target intelligent function module.

Start I/O No.: 0020

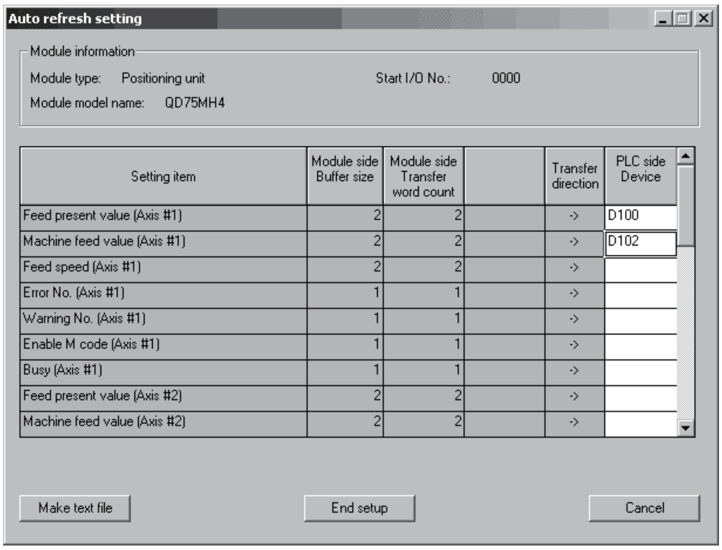
Module type: Positioning Module

Module model name: QD75M2

Parameter setting module

Start I/O No.	Module model name	Initial setting	Auto refresh
0000	QD75D4	Unavailable	Available
0020	QD75M2	Unavailable	Available

[Intelligent function module utility]



Module information

Module type: Positioning unit

Start I/O No.: 0000

Module model name: QD75MH4

Setting item	Module side Buffer size	Module side Transfer word count		Transfer direction	PLC side Device
Feed present value (Axis #1)	2	2		->	D100
Machine feed value (Axis #1)	2	2		->	D102
Feed speed (Axis #1)	2	2		->	
Error No. (Axis #1)	1	1		->	
Warning No. (Axis #1)	1	1		->	
Enable M code (Axis #1)	1	1		->	
Busy (Axis #1)	1	1		->	
Feed present value (Axis #2)	2	2		->	
Machine feed value (Axis #2)	2	2		->	

DISPLAY/SETTING DATA

Item	Description
Project save path	Choose the save destination of the GX Developer project to which auto refresh setting will be made.
GX Developer project	Choose the GX Developer project to which auto refresh setting will be made.
Start I/O No.	Set the first I/O No. (I/O address) of the QD75/LD75/LD77.
Package name	Choose the positioning module.
Module model name	Choose the model of the QD75/LD75/LD77.
Intelligent function module parameter setting module	Shows the module to which the initial setting or auto refresh setting has been made in the intelligent function module utility.
"Auto refresh" button	Click this button to show the auto refresh setting dialog box.
"Delete" button	Click this button to make deletion from the intelligent function module parameter setting module.
PLC side Device	Set the programmable controller side devices to be automatically refreshed for the QD75/LD75/LD77 items. Data is automatically refreshed between the set devices and QD75/LD75/LD77 buffer memory.
"Make text file" button	Used to save the auto refresh settings as text data. Clicking this button shows the text file creation dialog box, where you set the save destination drive/path and file name.
"End setup" button	Click this button to register the auto refresh setting and close the dialog box.

Point

- The PLC side devices set for auto refresh store the QD75/LD75/LD77 data. Do not store other values using a program (e.g. FROM and MOV instructions).
- Number of parameters that may be set on GX Configurator-QP
  The programmable controller CPU modules and MELSECNET/H network system's remote I/O station for use with installed intelligent function modules have restrictions on the number of parameters that may be set on GX Configurator.

Target of Installing Intelligent Function Modules	Max. Number of Set Parameters	
	Initial setting	Auto refresh setting
Q00J/Q00/Q01CPU	512	256
Q02/Q02H/Q06H/Q12H/Q25HCPU	512	256
Q02PH/Q06PH/Q12PH/Q25PHCPU	512	256
Q02UCPU	2048	1024
Q03UDCPU/Q04UDHCPU/Q06UDH/Q13UDH/Q26UDH/Q03UDE/Q04UDEH/Q06UDEH/Q13UDEH/Q26UDEHCPU	4096	2048
L02CPU	2048	1024
L26CPU-BT	4096	2048
MELSECNET/H remote I/O station	512	256

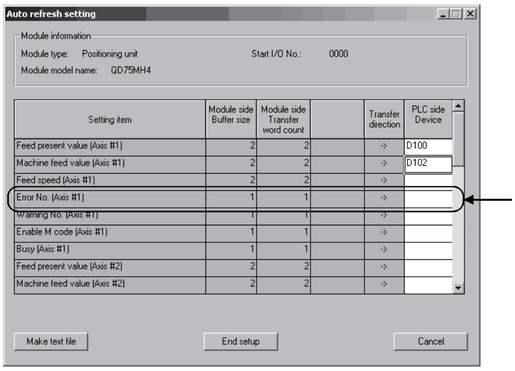
Hence, when multiple intelligent function modules are installed on the remote I/O station, set GX Configurator so that a total of the set parameters of all intelligent function modules does not exceed the maximum number of set parameters of the remote I/O station.

Calculate the total of the set parameters separately for the initial setting and auto refresh setting.

The number of parameters that may be set on GX Configurator-QP per module is as follows.

Target Module	Initial setting	Auto refresh setting
QD75P1, QD75D1, QD75M1, QD75MH1	———	7 (max. number of set parameters)
QD75P2, QD75D2, QD75M2, QD75MH2	———	14 (max. number of set parameters)
QD75P4, QD75D4, QD75M4, QD75MH4, LD75P4, LD75D4, LD77MH4	———	28 (max. number of set parameters)

Example) How to count the number of set parameters for auto refresh setting



Auto refresh setting

Module information
Module type: Positioning unit
Start I/O No.: 0000
Module model name: QD75MH4

Setting item	Module side Buffer size	Module side Transfer word count		Transfer direction	PLC side Device
Feed present value (Axis #1)	2	2		->	D100
Machine feed value (Axis #1)	2	2		->	D102
Feed speed (Axis #1)	2	2		->	
Error No. (Axis #1)	1	1		->	
Warning No. (Axis #1)	1	1		->	
Enable M code (Axis #1)	1	1		->	
Busy (Axis #1)	1	1		->	
Feed present value (Axis #2)	2	2		->	
Machine feed value (Axis #2)	2	2		->	

This single line is counted as one parameter that has been set.
A blank is counted out.
All setting items of this setting screen are added to the numbers of other intelligent function modules to calculate a sum total.

11.1.4 Multi module batch write

PURPOSE

Batch write to multiple QD75/LD75/LD77s.

Point

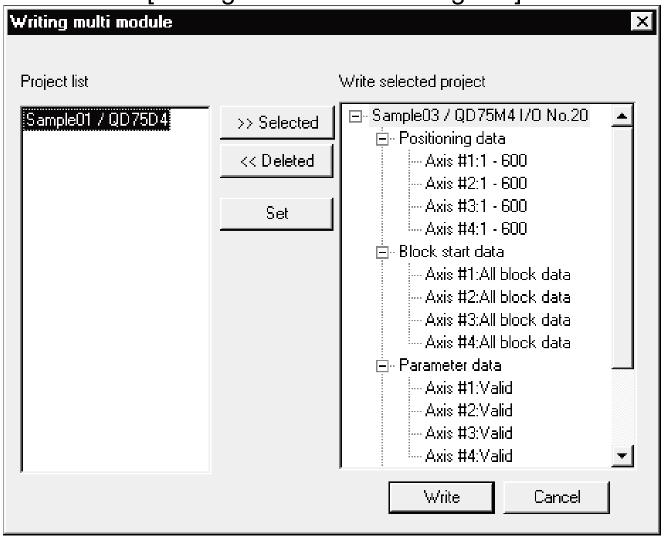
- Note that data cannot be batch-written simultaneously to the positioning module of MELSEC-Q series and that of MELSEC-L series on the same route.
- Whether multi module batch write may be performed or not is determined by the PLC state check setting in Option setting. (Refer to Section 11.5)

BASIC OPERATION

1. Open all projects to be batch written.
2. Specify the connection target in each project. (Refer to Section 7.1.)
3. Click the [Online] → [Writing of batch of multi module] menu.
4. Choose the write target project from the project list in the Writing multi module dialog box, and click the ">>Selected" button. (The dialog box for choosing the items to be written to the module appears.)
5. Set the types and ranges of the data to be written and click the "OK" button.
6. Repeat the above steps 4 to 5 for the projects to be batch written.
7. Click the "Write" button in the Writing multi module dialog box.

DISPLAY/SETTING SCREEN

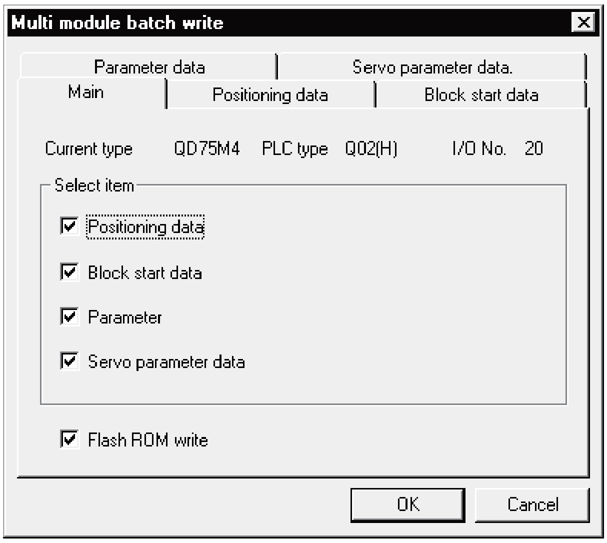
[Writing multi module dialog box]



Project list: Sample01 / QD75D4

Write selected project:

- Sample03 / QD75M4 I/O No.20
  - Positioning data
    - Axis #1:1 - 600
    - Axis #2:1 - 600
    - Axis #3:1 - 600
    - Axis #4:1 - 600
  - Block start data
    - Axis #1:All block data
    - Axis #2:All block data
    - Axis #3:All block data
    - Axis #4:All block data
  - Parameter data
    - Axis #1:Valid
    - Axis #2:Valid
    - Axis #3:Valid
    - Axis #4:Valid



Current type QD75M4 PLC type Q02(H) I/O No. 20

☑ Positioning data
☑ Block start data
☑ Parameter
☑ Servo parameter data

☑ Flash ROM write

DISPLAY/SETTING DATA

Item	Description
Project list	Shows a list of the projects open in GX Configurator-QP.
Write selected project	Shows the projects for which multi module batch write will be performed. Make selection from the project list.
">>Selected" button	Click this button to register the project selected on the project list side to the write selected project side and display for that project the dialog box for selecting the items to be written to the module.
"<<Deleted" button	Click this button to return the project selected on the write selected project side to the project list side.
"Set" button	Click this button to display the dialog box for selecting the items to be written to the module for the project selected on the write selected project side.
<<Main>> <<Positioning data>> <<Block start data>> <<Parameter data>> <<Servo parameter data>> tab screen	Set the types and ranges of the data to be written to each project. The setting items are the same as in write to QD75/LD75/LD77. (Refer to Section 9.1.)
"Write" button	Click this button to batch write the projects registered as the write selected projects to the QD75/LD75/LD77.

11.2 Edit Functions for Data Setting

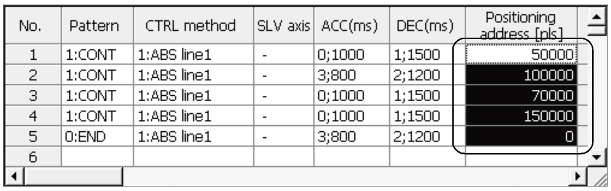
This section explains the edit functions which can be used for positioning data or block start data setting.

11.2.1 Cut/copy/paste

These functions cut/copy and paste some part of the positioning or block start data settings.
Also these functions cut/copy the values entered in Microsoft® Excel or Word table and pastes them to the positioning data or block start data of GX Configurator-QP.

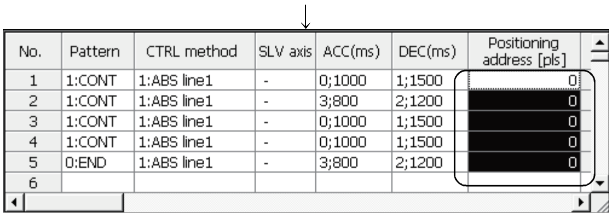
(1) Cut

Used to cut the selected range.



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	1;1500	50000
2	1:CONT	1:ABS line1	-	3;800	2;1200	100000
3	1:CONT	1:ABS line1	-	0;1000	1;1500	70000
4	1:CONT	1:ABS line1	-	0;1000	1;1500	150000
5	0:END	1:ABS line1	-	3;800	2;1200	0
6						

↓



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	1;1500	0
2	1:CONT	1:ABS line1	-	3;800	2;1200	0
3	1:CONT	1:ABS line1	-	0;1000	1;1500	0
4	1:CONT	1:ABS line1	-	0;1000	1;1500	0
5	0:END	1:ABS line1	-	3;800	2;1200	0
6						

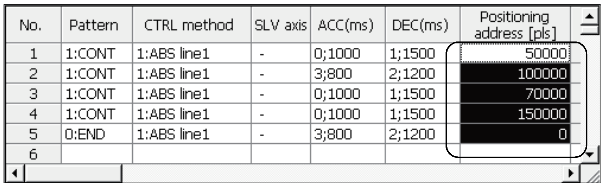
1) Choose the area to be cut.

2) Click the [Edit] → [Cut] menu (✂).
Alternatively, click [Cut] in the right-click menu.

3) The values in the selected range change to initial values.

(2) Copy

Used to copy the selected range to the clipboard of Microsoft® Windows® Operating System.



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	1;1500	50000
2	1:CONT	1:ABS line1	-	3;800	2;1200	100000
3	1:CONT	1:ABS line1	-	0;1000	1;1500	70000
4	1:CONT	1:ABS line1	-	0;1000	1;1500	150000
5	0:END	1:ABS line1	-	3;800	2;1200	0
6						

1) Choose the area to be copied.

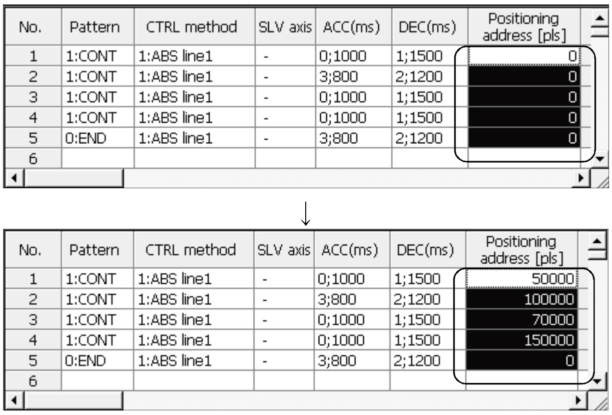
2) Click the [Edit] → [Copy] menu (⧉).
Alternatively, click [Copy] in the right-click menu.

(3) Paste

Used to paste the cut or copied data to the selected range.

Note that paste may not be made if:

- The control method is not set to the data of paste destination;
- The data of cut or copy destination is different in control method from the data of paste destination; or
- The item cut or copied is different from the item of paste destination.



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	1;1500	0
2	1:CONT	1:ABS line1	-	3;800	2;1200	0
3	1:CONT	1:ABS line1	-	0;1000	1;1500	0
4	1:CONT	1:ABS line1	-	0;1000	1;1500	0
5	0:END	1:ABS line1	-	3;800	2;1200	0
6						

↓

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	1;1500	50000
2	1:CONT	1:ABS line1	-	3;800	2;1200	100000
3	1:CONT	1:ABS line1	-	0;1000	1;1500	70000
4	1:CONT	1:ABS line1	-	0;1000	1;1500	150000
5	0:END	1:ABS line1	-	3;800	2;1200	0
6						

1) Choose the paste destination (copy destination) of the data cut (copied).

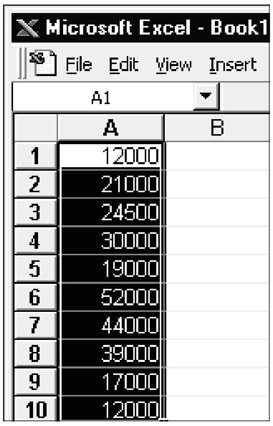
2) Click the [Edit] → [Paste] menu (📋).
Alternatively, click [Paste] in the right-click menu.

3) The values in the selected range change to the cut (copied) data.

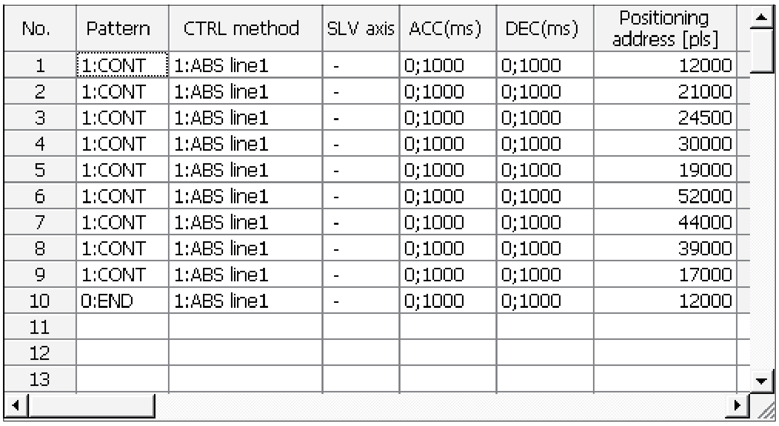
(4) Copying and pasting from Microsoft® Excel/Word table

Used to copy values entered into the Microsoft® Excel/Word table and paste them to positioning data or block start data of GX Configurator-QP.

[Example of copying Microsoft® Excel data and pasting them to positioning data]



	A	B
1	12000	
2	21000	
3	24500	
4	30000	
5	19000	
6	52000	
7	44000	
8	39000	
9	17000	
10	12000	



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	0;1000	12000
2	1:CONT	1:ABS line1	-	0;1000	0;1000	21000
3	1:CONT	1:ABS line1	-	0;1000	0;1000	24500
4	1:CONT	1:ABS line1	-	0;1000	0;1000	30000
5	1:CONT	1:ABS line1	-	0;1000	0;1000	19000
6	1:CONT	1:ABS line1	-	0;1000	0;1000	52000
7	1:CONT	1:ABS line1	-	0;1000	0;1000	44000
8	1:CONT	1:ABS line1	-	0;1000	0;1000	39000
9	1:CONT	1:ABS line1	-	0;1000	0;1000	17000
10	0:END	1:ABS line1	-	0;1000	0;1000	12000
11						
12						
13						

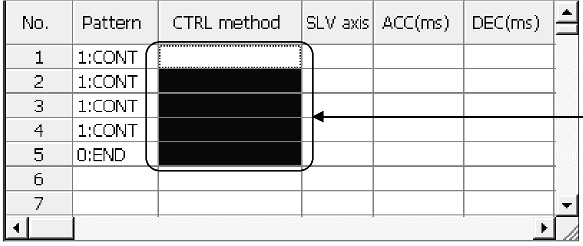
1) Choose and copy the Excel table.

2) Choose the setting range in the positioning data and click the [Edit] → [Paste] menu (📋).

HELPFUL OPERATION (1)

When making the same setting for multiple positioning data or block start data, perform the following operation to make batch setting in the selected range.
Note that batch setting may be made for the same item (column) only.
It cannot be made if you selected multiple items (columns).

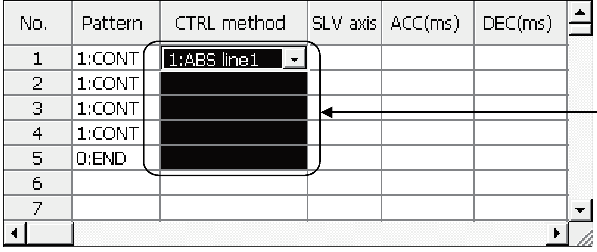
1) Choose the batch setting range.



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)
1	1:CONT				
2	1:CONT				
3	1:CONT				
4	1:CONT				
5	0:END				
6					
7					

Example: Batch-set the control method of positioning data No. 1 to 5.

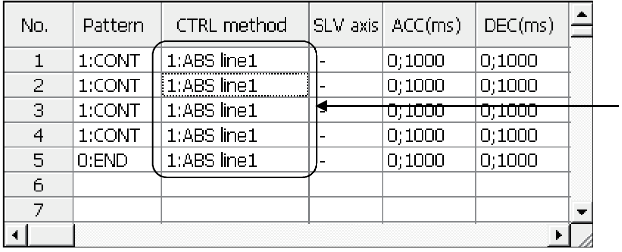
2) Entering the value from the keyboard sets it on the top row of the selected range.



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)
1	1:CONT	1:ABS line1			
2	1:CONT				
3	1:CONT				
4	1:CONT				
5	0:END				
6					
7					

Example: When you type "1", "1:ABS line 1" appears on the top row of the selected range.

3) Press the Enter key on the keyboard or click the other items with the mouse to change the other rows of the selected range to the same setting.



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)
1	1:CONT	1:ABS line1	-	0;1000	0;1000
2	1:CONT	1:ABS line1	-	0;1000	0;1000
3	1:CONT	1:ABS line1	-	0;1000	0;1000
4	1:CONT	1:ABS line1	-	0;1000	0;1000
5	0:END	1:ABS line1	-	0;1000	0;1000
6					
7					

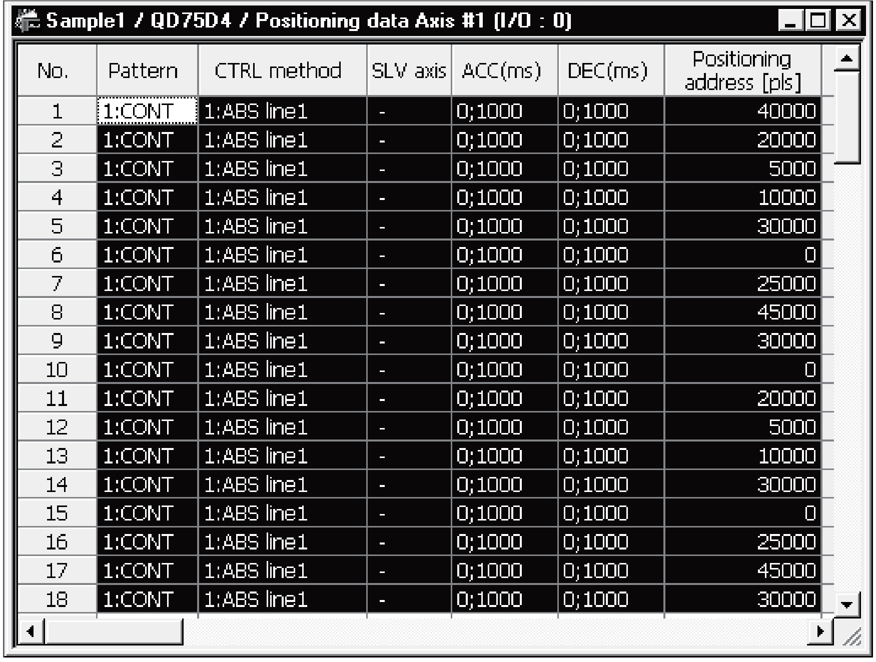
Example: "1:ABS line 1" is set to all rows of the selected range.

HELPFUL OPERATION (2)

Perform the following operation to cut/copy and paste all ranges of the positioning data or block start data displayed.

1. Click the [Edit] → [Select all] menu.

[Result of clicking [Select all] in the positioning data edit window]



Sample1 / QD75D4 / Positioning data Axis #1 (I/O : 0)

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	0;1000	40000
2	1:CONT	1:ABS line1	-	0;1000	0;1000	20000
3	1:CONT	1:ABS line1	-	0;1000	0;1000	5000
4	1:CONT	1:ABS line1	-	0;1000	0;1000	10000
5	1:CONT	1:ABS line1	-	0;1000	0;1000	30000
6	1:CONT	1:ABS line1	-	0;1000	0;1000	0
7	1:CONT	1:ABS line1	-	0;1000	0;1000	25000
8	1:CONT	1:ABS line1	-	0;1000	0;1000	45000
9	1:CONT	1:ABS line1	-	0;1000	0;1000	30000
10	1:CONT	1:ABS line1	-	0;1000	0;1000	0
11	1:CONT	1:ABS line1	-	0;1000	0;1000	20000
12	1:CONT	1:ABS line1	-	0;1000	0;1000	5000
13	1:CONT	1:ABS line1	-	0;1000	0;1000	10000
14	1:CONT	1:ABS line1	-	0;1000	0;1000	30000
15	1:CONT	1:ABS line1	-	0;1000	0;1000	0
16	1:CONT	1:ABS line1	-	0;1000	0;1000	25000
17	1:CONT	1:ABS line1	-	0;1000	0;1000	45000
18	1:CONT	1:ABS line1	-	0;1000	0;1000	30000

Point

- When "data No. 1 to data No. 100" has been selected in the data No. setting of the GX Configurator-QP option function, positioning data No. 101 to No. 600 are not included in the selection range.
- For the block start data, only the block to be edited is the selection range
- If data do not match between the axes, data of all ranges cannot be pasted. In that case, perform the axis copy (refer to Section 11.3.1).

11.2.2 Jump

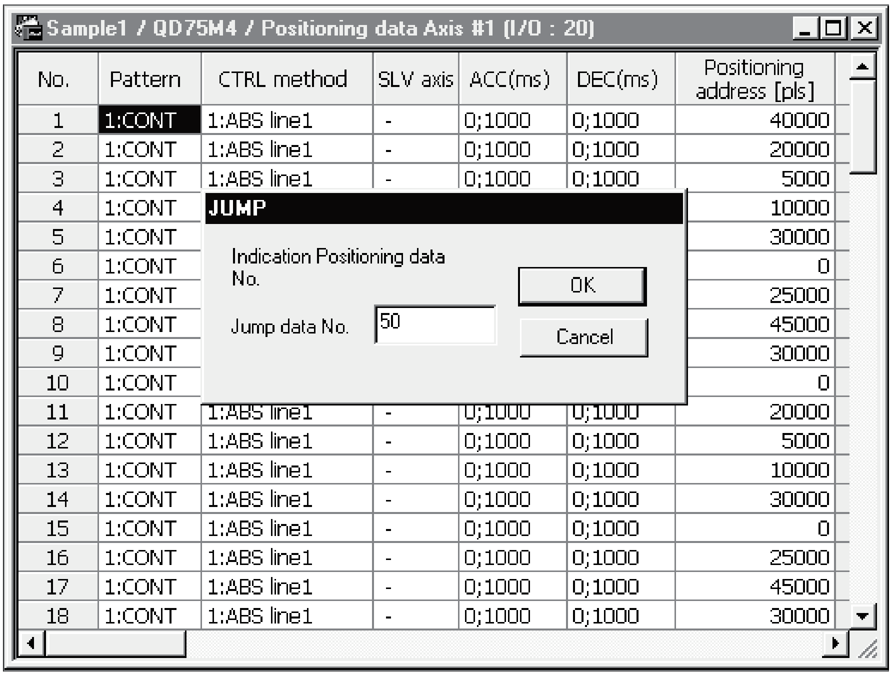
PURPOSE

Move the cursor to the data No. specified for a positioning data edit window. Alternatively, move the cursor to the point No. specified in the block start data edit window.

BASIC OPERATION

1. Click the [Edit] → [Jump] menu.
2. Set the positioning data No. or block start data point No. of the jump destination in the JUMP dialog box.
3. Click the "OK" button.

DISPLAY/SETTING SCREEN



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	0;1000	40000
2	1:CONT	1:ABS line1	-	0;1000	0;1000	20000
3	1:CONT	1:ABS line1	-	0;1000	0;1000	5000
4	1:CONT					10000
5	1:CONT					30000
6	1:CONT					0
7	1:CONT					25000
8	1:CONT					45000
9	1:CONT					30000
10	1:CONT					0
11	1:CONT	1:ABS line1	-	0;1000	0;1000	20000
12	1:CONT	1:ABS line1	-	0;1000	0;1000	5000
13	1:CONT	1:ABS line1	-	0;1000	0;1000	10000
14	1:CONT	1:ABS line1	-	0;1000	0;1000	30000
15	1:CONT	1:ABS line1	-	0;1000	0;1000	0
16	1:CONT	1:ABS line1	-	0;1000	0;1000	25000
17	1:CONT	1:ABS line1	-	0;1000	0;1000	45000
18	1:CONT	1:ABS line1	-	0;1000	0;1000	30000

Indication Positioning data No.

Jump data No. 50

DISPLAY/SETTING DATA

Item	Description
Jump data No.	Set the positioning data No. or the block start data point No. of the jump destination.
"OK" button	Click this button to move the cursor to the specified No.

11.2.3 Clearing the rows/columns

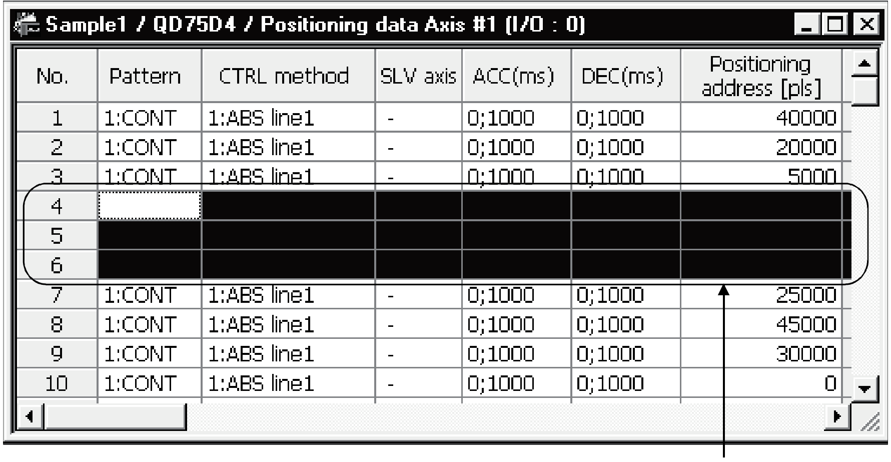
PURPOSE

Clear only the rows or columns selected in the positioning data window or block start data edit window.

BASIC OPERATION

1. Choose the rows (columns) which you want to initialize in the positioning data or block start data edit window.
2. Click the [Edit] → [Clear row]/[Clear column] menu.
   Alternatively, click the [Clear row]/[Clear column] menu in the right-click menu.

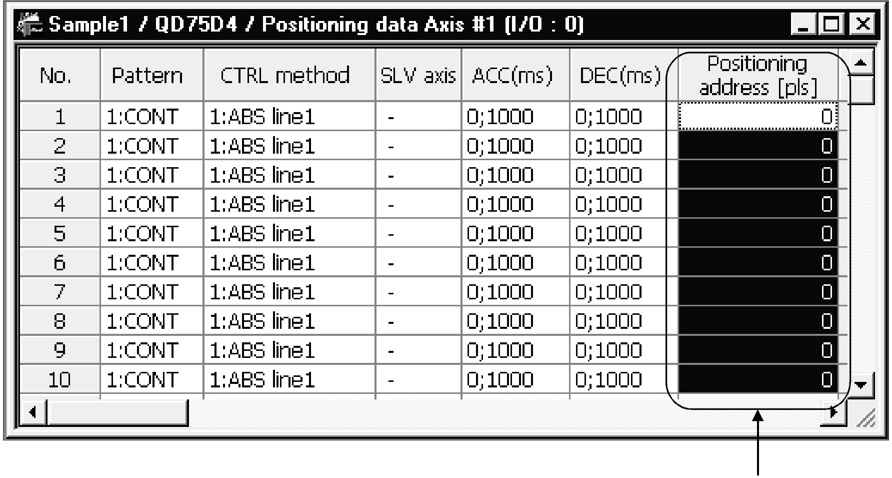
[Example of clearing the rows]



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	0;1000	40000
2	1:CONT	1:ABS line1	-	0;1000	0;1000	20000
3	1:CONT	1:ABS line1	-	0;1000	0;1000	5000
4						
5						
6						
7	1:CONT	1:ABS line1	-	0;1000	0;1000	25000
8	1:CONT	1:ABS line1	-	0;1000	0;1000	45000
9	1:CONT	1:ABS line1	-	0;1000	0;1000	30000
10	1:CONT	1:ABS line1	-	0;1000	0;1000	0

The selected rows are cleared (to the default values).

[Example of clearing the columns]



No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]
1	1:CONT	1:ABS line1	-	0;1000	0;1000	0
2	1:CONT	1:ABS line1	-	0;1000	0;1000	0
3	1:CONT	1:ABS line1	-	0;1000	0;1000	0
4	1:CONT	1:ABS line1	-	0;1000	0;1000	0
5	1:CONT	1:ABS line1	-	0;1000	0;1000	0
6	1:CONT	1:ABS line1	-	0;1000	0;1000	0
7	1:CONT	1:ABS line1	-	0;1000	0;1000	0
8	1:CONT	1:ABS line1	-	0;1000	0;1000	0
9	1:CONT	1:ABS line1	-	0;1000	0;1000	0
10	1:CONT	1:ABS line1	-	0;1000	0;1000	0

The selected columns are cleared (to the default values).

11.2.4 Initializing the data

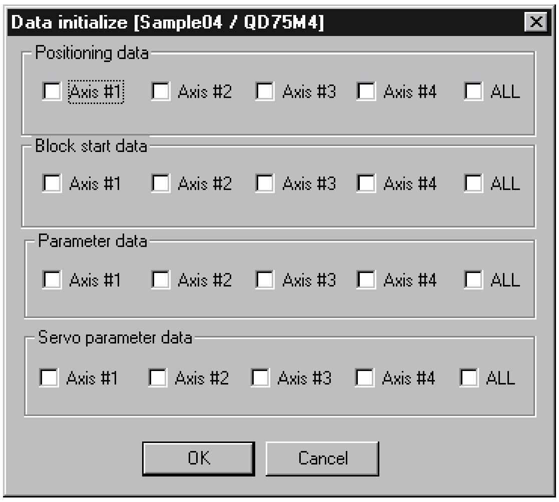
PURPOSE

Initialize the parameters, servo parameters, positioning data and block start data (including condition data) of the active project axis-by-axis.
Note that the project data saved in the QD75/LD75/LD77, HD and FD are not initialized.

BASIC OPERATION

1. Set the project to be initialized as the active project. (Refer to Section 5.2.)
2. Click the [Tool] → [Initialize data] menu.
3. Set the types and axes of the data to be initialized in the Data initialize dialog box.
4. Click the "OK" button.

DISPLAY/SETTING SCREEN



Data initialize [Sample04 / QD75M4]

Positioning data
☐ Axis #1 ☐ Axis #2 ☐ Axis #3 ☐ Axis #4 ☐ ALL

Block start data
☐ Axis #1 ☐ Axis #2 ☐ Axis #3 ☐ Axis #4 ☐ ALL

Parameter data
☐ Axis #1 ☐ Axis #2 ☐ Axis #3 ☐ Axis #4 ☐ ALL

Servo parameter data
☐ Axis #1 ☐ Axis #2 ☐ Axis #3 ☐ Axis #4 ☐ ALL

DISPLAY/SETTING DATA

Item	Description
Positioning data	Set the axes of the positioning data to be initialized. Check "ALL" to initialize the positioning data of all axes.
Block start data	Set the axes of the block start data to be initialized. Check "ALL" to initialize the block start data of all axes.
Parameter data	Set the axes of the parameters to be initialized. Check "ALL" to initialize the parameter data of all axes.
Servo parameter data	Set the axes of the parameters to be initialized. Check "ALL" to initialize the servo parameter data of all axes.
"OK" button	Click this button to initialize the data.

11.3 Copying the Data

Copy the positioning data, block start data, parameters and servo parameters, set to the project axis-by-axis.
Also, copy the set block start data to another block.
When copying data to another project, use copy/paste of the edit function. (Refer to Section 11.2.1.)

11.3.1 Copying the data on an axis basis (Axis copy)

PURPOSE

Using the axis copy function, copy the positioning data, block start data, parameters and servo parameters of any axis to another axis of the same project.

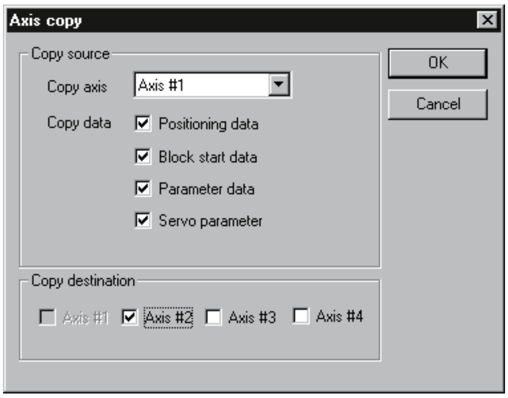
Point

When the axis copy is performed, data may not match between the axes. After performing the axis copy, please carry out an error check (refer to Section 8.6).

BASIC OPERATION

1. Display any of the parameters (refer to Section 8.1), servo parameters (refer to Section 8.2),positioning data (refer to Section 8.3) and block start data (refer to Section 8.5) edit windows.
2. Click the [Edit] → [Axis copy] menu.
3. Set the axis of the copy source, the types of the data to be copied, and the axis of the copy destination.
4. Click the "OK" button.

DISPLAY/SETTING SCREEN



Axis copy

Copy source

Copy axis: Axis #1

Copy data:
☑ Positioning data
☑ Block start data
☑ Parameter data
☑ Servo parameter

Copy destination

☐ Axis #1 ☑ Axis #2 ☐ Axis #3 ☐ Axis #4

DISPLAY/SETTING DATA

Item	Description
Copy source data	Choose the axis of the copy source and set the data to be copied. The block start data includes condition data.
Copy destination	Set the axis of the copy destination.
"OK" button	Click this button to copy the data.

11.3.2 Block start copy

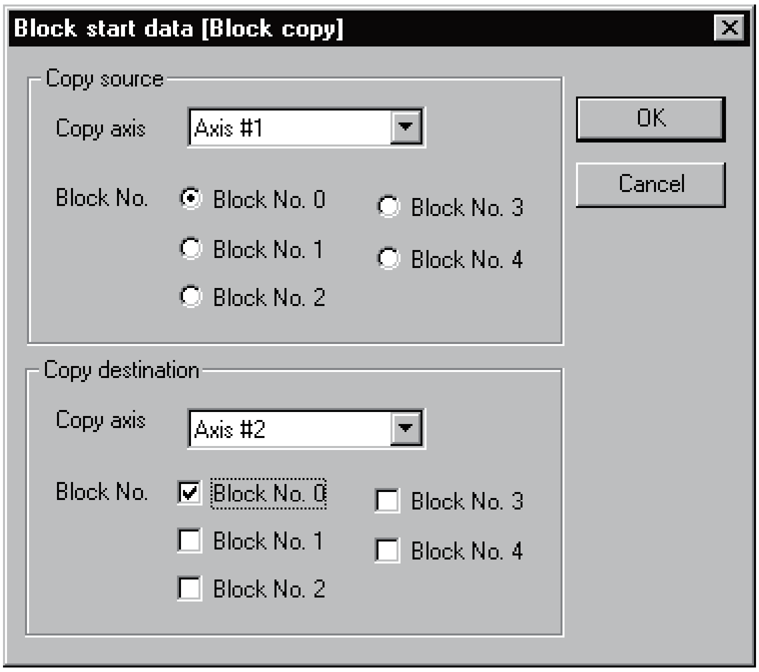
PURPOSE

Using the block start copy function, copy the block start data to the other blocks. The block start copy function is performed to copy data between blocks in the same project.

BASIC OPERATION

1. Display the block start data edit window (refer to Section 8.5).
2. Click the [Edit] → [Block start copy] menu.
3. Set the block No. of the copy source and the block No. of the copy destination.
4. Click the "OK" button.

DISPLAY/SETTING SCREEN



Copy source
Copy axis: Axis #1
Block No.: ● Block No. 0 ○ Block No. 1 ○ Block No. 2 ○ Block No. 3 ○ Block No. 4

Copy destination
Copy axis: Axis #2
Block No.: ☑ Block No. 0 ☐ Block No. 1 ☐ Block No. 2 ☐ Block No. 3 ☐ Block No. 4

DISPLAY/SETTING DATA

Item	Description
Copy source block No.	Choose the copy axis and the block No. of the copy source.
Copy destination block No.	Set the copy axis and the block No. of the copy destination. Multiple blocks can be set at the same time.
"OK" button	Click this button to copy the data.

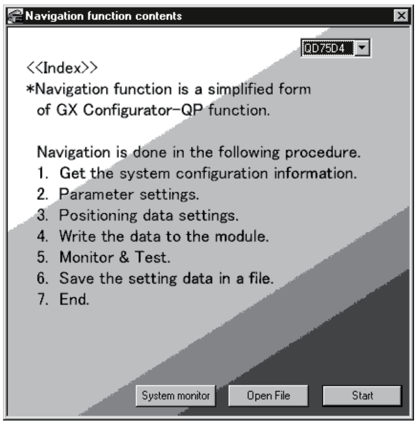
11.4 Navigation Function

PURPOSE

Perform the operations necessary to use the QD75P and QD75D, from setting of the parameters and positioning data to write to QD75P and QD75D, monitor and test in the wizard format.
(The navigation function is unavailable for the QD75M,QD75MH, LD75,and LD77.)
For parameter settings, refer to the user's manual for the positioning module used.

BASIC OPERATION

1. Set the connection target. (Refer to Section 7.1.)
2. Click the [Tool] → [Navigation] menu.
3. When the Navigation function screen appears, perform operation using the following procedure.
   If the QD75P and QD75D is not loaded, steps 4) to 10) cannot be executed.



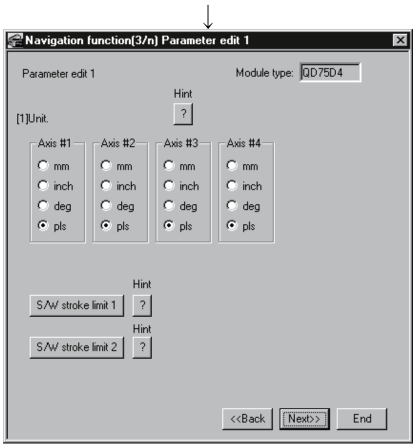
<<Index>>
*Navigation function is a simplified form of GX Configurator-QP function.

Navigation is done in the following procedure.
1. Get the system configuration information.
2. Parameter settings.
3. Positioning data settings.
4. Write the data to the module.
5. Monitor & Test.
6. Save the setting data in a file.
7. End.

1) Choose the model name.

2) Click the "Start" button.

↓



Module type: QD75D4

[1]Unit.

Axis #1	Axis #2	Axis #3	Axis #4
○ mm	○ mm	○ mm	○ mm
○ inch	○ inch	○ inch	○ inch
○ deg	○ deg	○ deg	○ deg
● pls	● pls	● pls	● pls

3) Make setting on the parameter edit 1 screen.
After setting, click the "Next>>" button.

Clicking the ? button shows the hint for the corresponding item.

↓

Set each parameter.
(Screen is eliminated for simplicity)

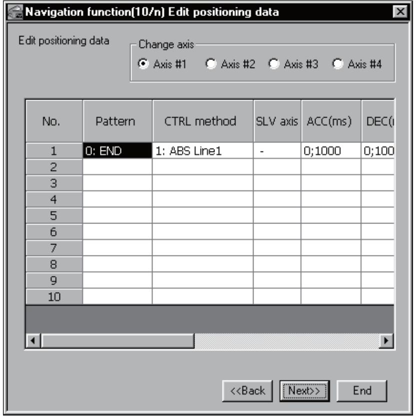
✻ To change the setting, click the "<<Back" button to return to the preceding screen.

↓

(To the next page)

(From the preceding page)

↓

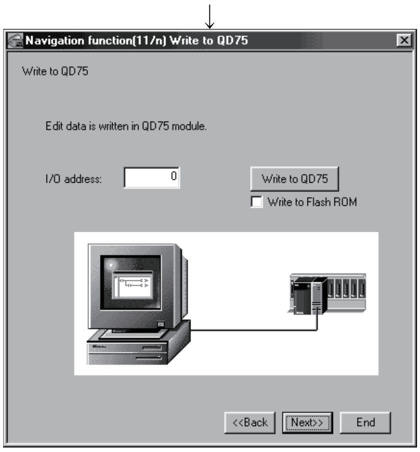


● Axis #1 ○ Axis #2 ○ Axis #3 ○ Axis #4

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(
1	0: END	1: ABS Line1	-	0;1000	0;100
2					
3					
4					
5					
6					
7					
8					
9					
10					

4) Choose the axis in Change axis and set the positioning data.
After setting, click the "Next>>" button.

↓



Edit data is written in QD75 module.

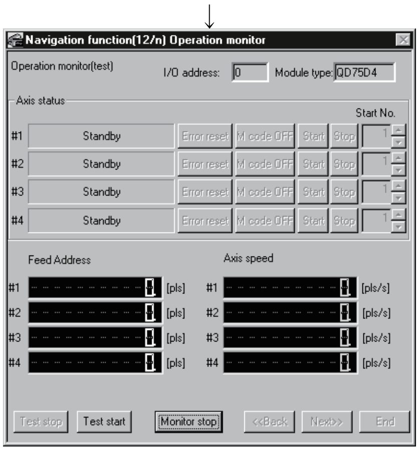
I/O address: 0

☐ Write to Flash ROM

5) Set I/O address
To write data to the flash ROM of the QD75P and QD75D at the same time, click unchecked "Write to flash ROM".

6) Click the "Write to QD75" button.
When write is completed, click the "Next>>" button.

↓



I/O address: 0 Module type: QD75D4

#1 Standby 1
#2 Standby 1
#3 Standby 1
#4 Standby 1

7) Click the "Monitor start" button.

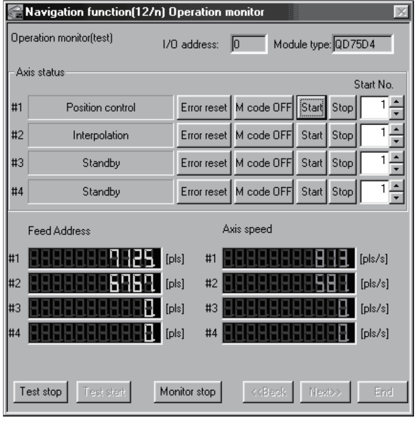
8) Click the "Test start" button.

↓

(To the next page)

(From the preceding page)

↓



Navigation function(12/n) Operation monitor

Operation monitor(test) I/O address: 0 Module type: QD75D4

Axis status

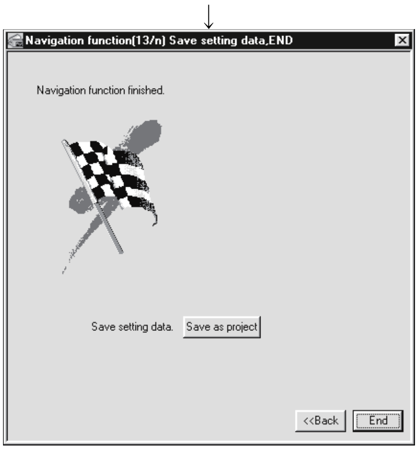
		Start No.
#1	Position control	1
#2	Interpolation	1
#3	Standby	1
#4	Standby	1

	Feed Address		Axis speed
#1	7125 [pls]	#1	813 [pls/s]
#2	6767 [pls]	#2	581 [pls/s]
#3	0 [pls]	#3	0 [pls/s]
#4	0 [pls]	#4	0 [pls/s]

9) Set the positioning data No. in Start and click the "Start" button to start test operation.
Use the "Stop", "Error reset" and/or "M code OFF" button as necessary.

10) When the test is over, click the "Test stop" button.
After exiting from the test mode, click the "Next>>" button.

↓



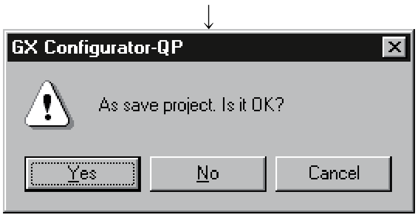
Navigation function(13/n) Save setting data,END

Navigation function finished.

Save setting data.

11) When saving the set parameters and positioning data, click the "Save as project" button.
When not saving them, click the "End" button.

↓



GX Configurator-QP

As save project. Is it OK?

12) Click the "Yes" button to terminate the navigation function.

11.5 Option Setting

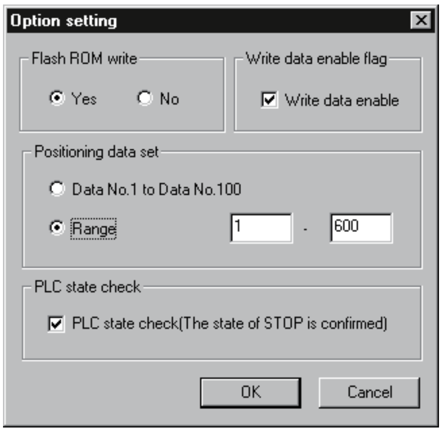
PURPOSE

Set the option function of GX Configurator-QP.
The option function is used to make settings for write to module and set the display range of positioning data.

BASIC OPERATION

1. Click the [Tool] → [Option] menu.
2. Make settings in the Option settings dialog box.
3. To exit, click the "OK" button.

DISPLAY/SETTING SCREEN



Option setting

Flash ROM write
● Yes ○ No

Write data enable flag
☑ Write data enable

Positioning data set
○ Data No.1 to Data No.100
● Range 1 - 600

PLC state check
☑ PLC state check(The state of STOP is confirmed)

DISPLAY/SETTING DATA

Item	Description
Flash ROM write	Select whether data will be written to flash ROM or not in the initial setting for write to module. • YES ...... Choose Yes to make the initial setting that data will be written to flash ROM when write to module is performed. • NO .... Choose No to make the initial setting that data will not be written to flash ROM when write to module is performed.
Write data enable flag	When you check this check box, any changes in the test mode using positioning data test edit or teaching are retained after the end of the test mode. When you do not check this check box, data changes in the test mode are made invalid and return to the previous data at the end of the test mode.
Positioning data set	Choose the range of the positioning data No. to be displayed on the positioning data edit window. • Data No. 1 to No. 100 .....Shows positioning data No. 1 to 100. • Range..............................Shows positioning data No. 1 to 600.
PLC state check	Make selection whether the programmable controller state is checked or not when write to module, multi module batch write, flash ROM write request or QD75/LD75/LD77 initialization is executed. (Default is "checked") Since the set data on the Option screen is saved not on a project basis but on an application basis, the selected set values apply to all projects. If you do not choose PLC state check, write cannot be performed when X0 (QD75/LD75/LD77 READY signal) of the corresponding module is ON. (see table below)
"OK" button	Click this button to determine the set data.

PLC state check	☑PLC state check				☐ PLC state check			
PLC state	STOP		except STOP		STOP		except STOP	
X0 status of corresponding module	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Write processing	× (Note 2)	○	× (Note 1)	× (Note 1)	× (Note 2)	○	× (Note 2)	○

○ : Write enabled × : Write disabled

Note 1 : "Please make the status of PLC in to STOP or remove the check on the PLC state check on the option screen. " appears.

Note 2 : "The QD75/LD75/LD77 READY signal is turned on. Please execute again after turning off the QD75/LD75/LD77 READY signal." appears.

Point

When you increased the display range in positioning data display No. setting, it will take longer until the positioning data edit window appears.
When positioning data No. 101 onwards are not necessary, choose data No. 1 to No. 100. (The positioning data No. defaults to data No. 1 to No. 100.)

11.6 Printing the Project Data

Print the positioning data, block start data, parameters and servo parameters set in the project.

11.6.1 Printer setting

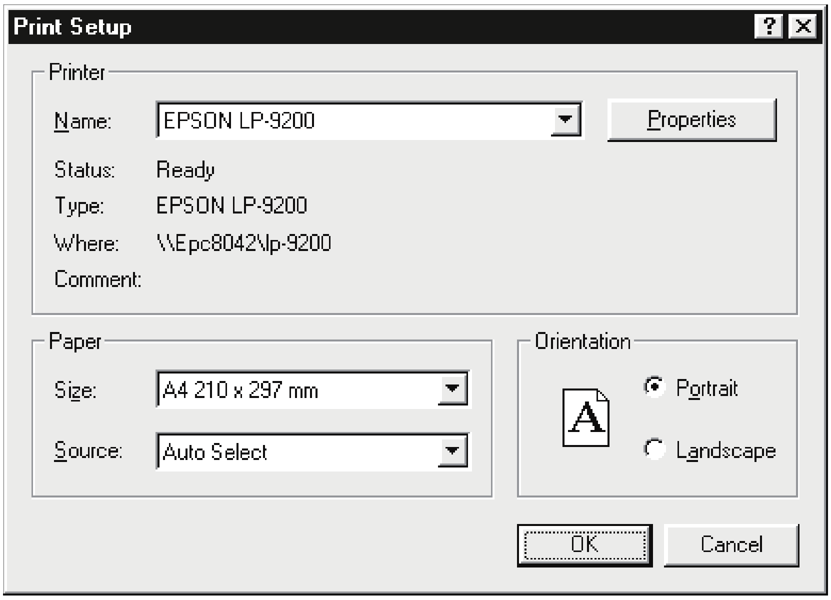
PURPOSE

Choose the printer connected to the peripheral device, paper and printing orientation.
For printer setting, refer to Microsoft® Windows® Operating System manual.
Also, for the printer properties, refer to the printer manual as they depend on Microsoft® Windows® Operating System manual printer driver used.

BASIC OPERATION

1. Click the [Project] → [Printer setup] menu.
2. Set the printer, etc.
3. To exit, click the "OK" button.

DISPLAY/SETTING SCREEN



Print Setup

Printer

Name: EPSON LP-9200

Status: Ready

Type: EPSON LP-9200

Where: \\Epc8042\lp-9200

Comment:

Paper

Size: A4 210 x 297 mm

Source: Auto Select

Orientation

● Portrait

○ Landscape

(The screen shows the setting for Windows® 95.)

11.6.2 Printing

PURPOSE

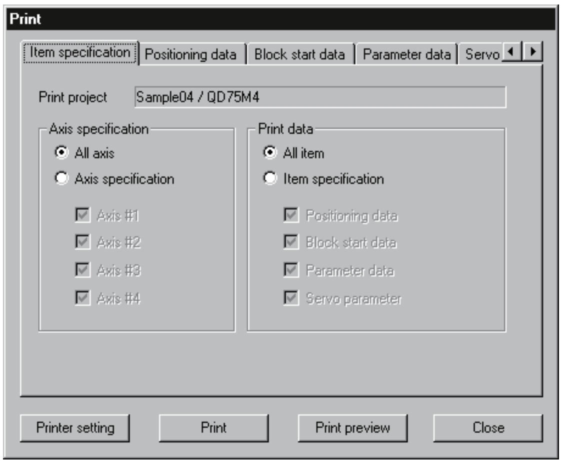
Print the positioning data, block start data (including condition data), parameter data and servo parameter data of the active project.

BASIC OPERATION

1. Set the project to be printed as the active project. (Refer to Section 5.2.)
2. Click the [Project] → [Print] menu ( ).
3. Set the axes and data types and ranges to be printed.
4. Click the "Print preview" button.
5. Clicking the "Print" button shows the Print dialog box.
6. Click the "OK" button in the Print dialog box to start printing.

DISPLAY/SETTING SCREEN

<<Item specification>> tab screen

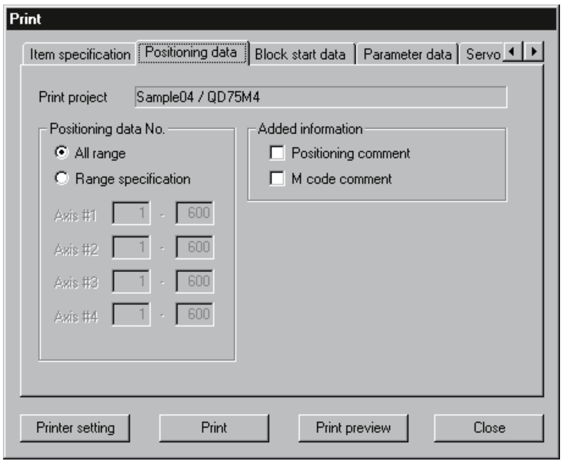


Print project: Sample04 / QD75M4

Axis specification
● All axis
○ Axis specification
☑ Axis #1
☑ Axis #2
☑ Axis #3
☑ Axis #4

Print data
● All item
○ Item specification
☑ Positioning data
☑ Block start data
☑ Parameter data
☑ Servo parameter

<<Positioning data>> tab screen

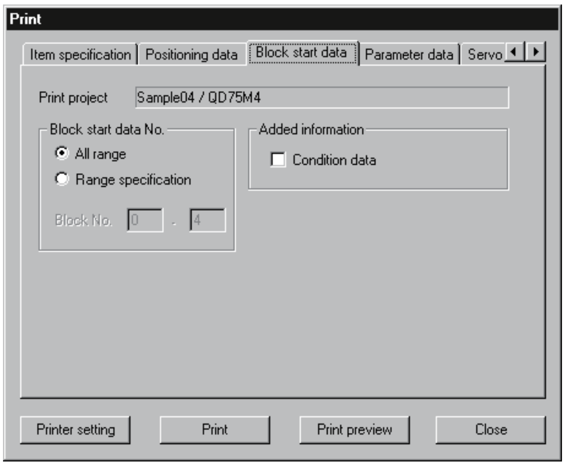


Print project: Sample04 / QD75M4

Positioning data No.
● All range
○ Range specification
Axis #1: 1 - 600
Axis #2: 1 - 600
Axis #3: 1 - 600
Axis #4: 1 - 600

Added information
☐ Positioning comment
☐ M code comment

<<Block start data>> tab screen

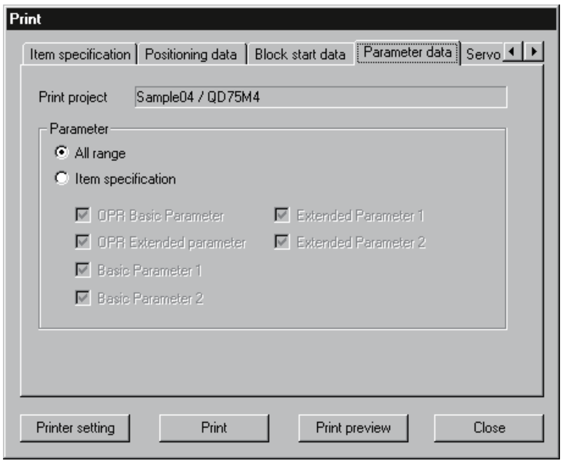


Print project: Sample04 / QD75M4

Block start data No.
● All range
○ Range specification
Block No.: 0 - 4

Added information
☐ Condition data

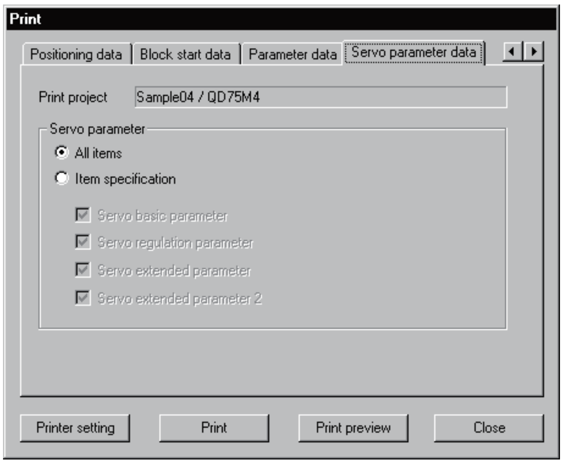
<<Parameter data>> tab screen



Print project: Sample04 / QD75M4

Parameter
● All range
○ Item specification
☑ OPR Basic Parameter
☑ OPR Extended parameter
☑ Basic Parameter 1
☑ Basic Parameter 2
☑ Extended Parameter 1
☑ Extended Parameter 2

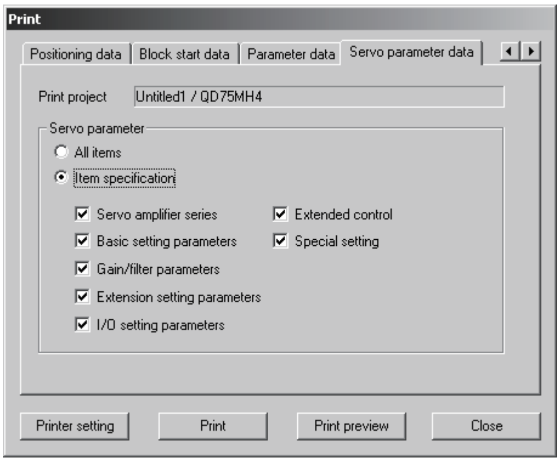
<<Servo parameter data>> tab screen



Print project: Sample04 / QD75M4

Servo parameter
- ● All items
- ○ Item specification
  - ☑ Servo basic parameter
  - ☑ Servo regulation parameter
  - ☑ Servo extended parameter
  - ☑ Servo extended parameter 2

(Screen example: Screen displayed when the QD75M is chosen in model selection)

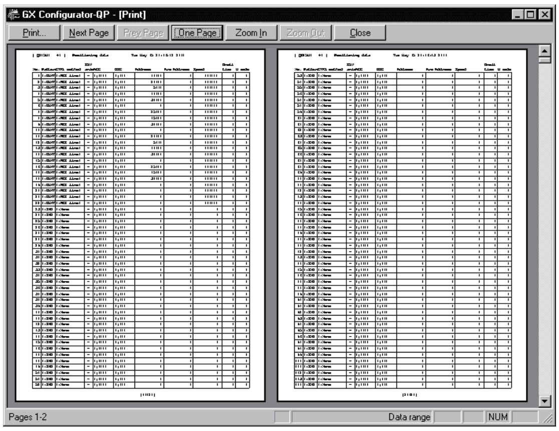


Print project: Untitled1 / QD75MH4

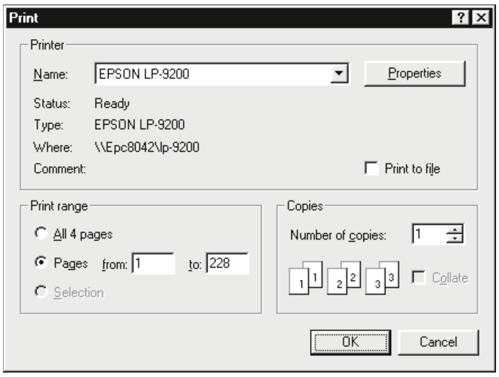
Servo parameter
- ○ All items
- ● Item specification
  - ☑ Servo amplifier series
  - ☑ Basic setting parameters
  - ☑ Gain/filter parameters
  - ☑ Extension setting parameters
  - ☑ I/O setting parameters
  - ☑ Extended control
  - ☑ Special setting

(Screen example: Screen displayed when the QD75MH/LD77 is chosen in model selection)

[Print preview screen]



[Print dialog box]



Printer

Name: EPSON LP-9200

Status: Ready

Type: EPSON LP-9200

Where: \\Epc8042\lp-9200

Comment:

☐ Print to file

Print range
- ○ All 4 pages
- ● Pages from: 1 to: 228
- ○ Selection

Copies

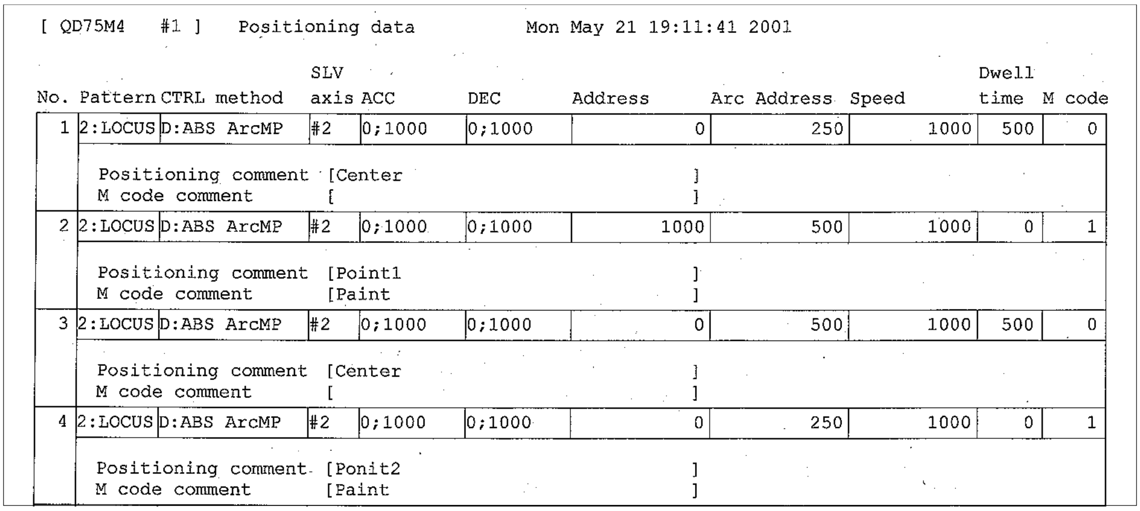
Number of copies: 1

☐ Collate

DISPLAY/SETTING DATA

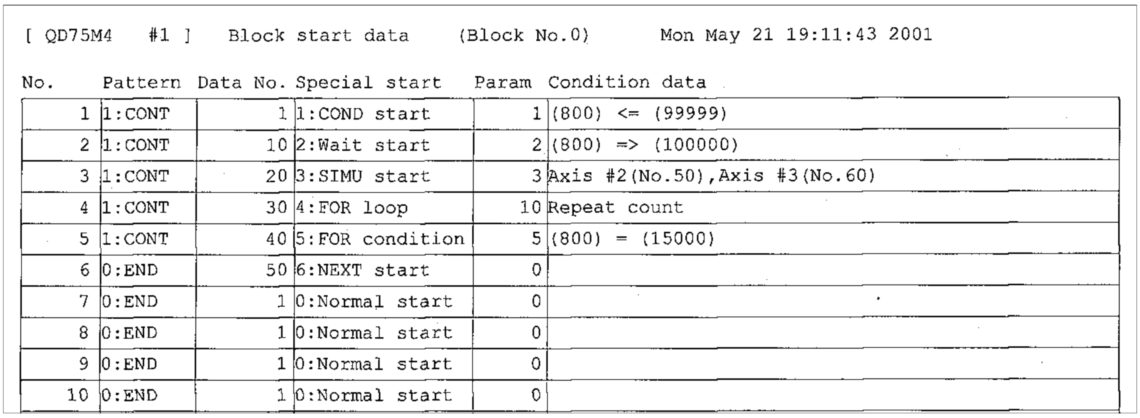
Item	Description
Print project	Shows the project name to be printed. The project selected on the project tree view is to be printed.
Axis specification	Set the axes whose data will be printed.
Print data	Set the types of data to be printed.
Positioning data No.	Set the printing ranges of positioning data. You can add positioning data and M code comments as additional information.
Block start data No.	Set the printing range of block start data. You can add condition data as added information.
Parameter data	Set the parameter types to be printed.
Servo parameter data	Set the servo parameter types to be printed.
"Printer setting" button	Click this button to display the Print setting dialog box (refer to Section 11.6.1).
"Print" button	Click this button to show the Print dialog.
"Print preview" button	Click this button to display the Print preview.
"Next Page" button "Prev Page" button	Click the corresponding button to preview the next or previous page.
"One Page/Two Page" button	Click this button to switch the preview between 1 page display and 2 page display.
"Zoom In" button "Zoom Out" button	Click the "Zoom In" button to enlarge the preview display. Click the "Zoom Out" button to reduce the preview display.
Printer Name	Select the printer name.
"Properties" button	Click this button to display the printer property dialog box. For the printer properties, refer to the printer manual.
Print range	Set the range of printing.
Copies	Set the number of copies printed.
"OK" button	Click this button to start printing.

[Positioning data print example]



```
[ QD75M4   #1 ]   Positioning data        Mon May 21 19:11:41 2001

                           SLV                                                        Dwell
No. Pattern CTRL method    axis ACC       DEC        Address     Arc Address Speed      time  M code
  1 2:LOCUS D:ABS ArcMP    #2   0;1000    0;1000           0          250      1000     500      0

     Positioning comment  [Center                              ]
     M code comment       [                                    ]
  2 2:LOCUS D:ABS ArcMP    #2   0;1000    0;1000        1000          500      1000       0      1

     Positioning comment  [Point1                              ]
     M code comment       [Paint                               ]
  3 2:LOCUS D:ABS ArcMP    #2   0;1000    0;1000           0          500      1000     500      0

     Positioning comment  [Center                              ]
     M code comment       [                                    ]
  4 2:LOCUS D:ABS ArcMP    #2   0;1000    0;1000           0          250      1000       0      1

     Positioning comment  [Ponit2                              ]
     M code comment       [Paint                               ]
```

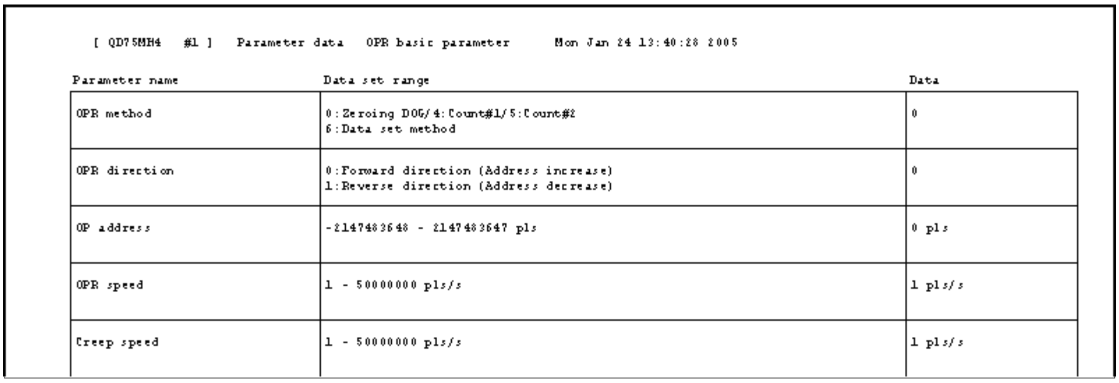
[Block start data print example]



[QD75M4 #1] Block start data (Block No.0) Mon May 21 19:11:43 2001

No.	Pattern	Data No.	Special start	Param	Condition data
1	1:CONT	1	1:COND start	1	(800) <= (99999)
2	1:CONT	10	2:Wait start	2	(800) => (100000)
3	1:CONT	20	3:SIMU start	3	Axis #2(No.50),Axis #3(No.60)
4	1:CONT	30	4:FOR loop	10	Repeat count
5	1:CONT	40	5:FOR condition	5	(800) = (15000)
6	0:END	50	6:NEXT start	0	
7	0:END	1	0:Normal start	0	
8	0:END	1	0:Normal start	0	
9	0:END	1	0:Normal start	0	
10	0:END	1	0:Normal start	0	

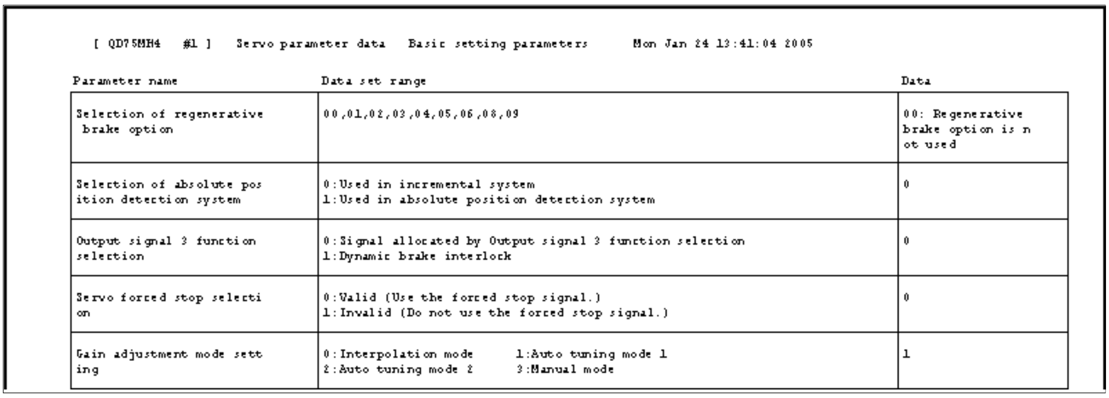
[Parameter print example]



[QD75MH4 #1] Parameter data OPR basic parameter Mon Jan 24 13:40:28 2005

Parameter name	Data set range	Data
OPR method	0:Zeroing DOG/4:Count#1/5:Count#2 6:Data set method	0
OPR direction	0:Forward direction (Address increase) 1:Reverse direction (Address decrease)	0
OP address	-2147483648 - 2147483647 pls	0 pls
OPR speed	1 - 50000000 pls/s	1 pls/s
Creep speed	1 - 50000000 pls/s	1 pls/s

[Servo parameter print example]



[QD75MH4 #1] Servo parameter data Basic setting parameters Mon Jan 24 13:41:04 2005

Parameter name	Data set range	Data
Selection of regenerative brake option	00,01,02,03,04,05,06,08,09	00: Regenerative brake option is not used
Selection of absolute position detection system	0:Used in incremental system 1:Used in absolute position detection system	0
Output signal 3 function selection	0:Signal allocated by Output signal 3 function selection 1:Dynamic brake interlock	0
Servo forced stop selection	0:Valid (Use the forced stop signal.) 1:Invalid (Do not use the forced stop signal.)	0
Gain adjustment mode setting	0:Interpolation mode 1:Auto tuning mode 1 2:Auto tuning mode 2 3:Manual mode	1

11.7 Positioning Data Setting in Test Mode

In the test mode, import the feed address to the positioning data address and write changed positioning data to the QD75/LD75/LD77.

11.7.1 Teaching

PURPOSE

Enter the feed address of the axis moved by JOG or MPG operation into the address of the positioning data.

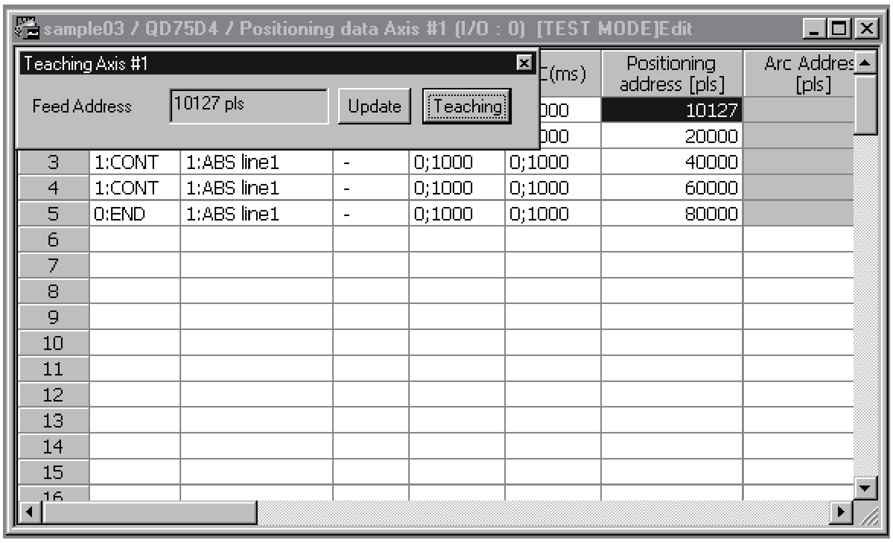
BASIC OPERATION

1. Click unchecked Write data enable flag in Option. (Refer to Section 11.5.)
2. Click the [Online] → [Test] → [Test On/Off] menu ( ).
3. The positioning data edit window appears. (Refer to Section 8.3.1)
4. Clicking the [Online] → [Test] → [Teaching] menu ( ) shows the feed address in the Teaching dialog box.
5. Click the [Online] → [Test] → [Operation test] → [Operation test #1 to #4] menu (to).
6. Click the <<JOG/MPG>> tab in the TEST MODE setting dialog box.
7. Perform JOG or MPG operation to move the axis. (Refer to Section 10.4.5.)
8. Clicking the "Update" button in the Teaching dialog box displays the latest feed address.
9. In the positioning data monitor window, choose the positioning data No. address or arc address where the feed address will be imported.
10. Clicking the "Teaching" button enters the feed address to the positioning data No. address or arc address.
11. Repeat the basic operation steps 7 to 10 to continue teaching.
12. To end teaching, click the [Online] → [Test] → [Teaching] menu ( ).

Point

If the Write data enable flag in Option is not made valid, the peripheral device does not retain the address set in the test mode.
Make the Write data enable flag invalid when you do not change the positioning data in the peripheral device.

DISPLAY/SETTING SCREEN


sample03 / QD75D4 / Positioning data Axis #1 (I/O : 0) [TEST MODE]Edit
Teaching Axis #1
Update
Teaching

Feed Address: 10127 pls

					(ms)	Positioning address [pls]	Arc Addres [pls]
					000	10127	
					000	20000	
3	1:CONT	1:ABS line1	-	0;1000	0;1000	40000	
4	1:CONT	1:ABS line1	-	0;1000	0;1000	60000	
5	0:END	1:ABS line1	-	0;1000	0;1000	80000	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

DISPLAY/SETTING DATA

Item	Description
Feed Address	Shows the feed address of the QD75/LD75/LD77.
"Update" button	Click this button to update the "feed address" to the latest feed address.
"Teaching" button	Click this button to enter the "feed address" into the cell selected in the positioning data edit window.
Positioning data edit window	Screen used to perform teaching or positioning data test edit in the test mode. Double-clicking the address or arc address influences the feed address.

11.7.2 Positioning data test edit

PURPOSE

Change the positioning data or block start data in the test mode and write them to the QD75/LD75/LD77.

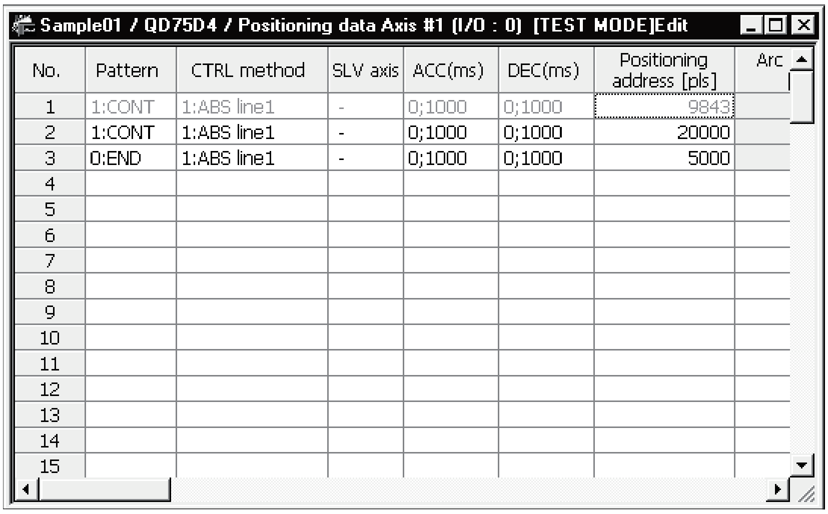
BASIC OPERATION

1. Click unchecked Write data enable flag in Option. (Refer to Section 11.5.)
2. Click the [Online] → [Test] → [Test On/Off] menu ( ).
3. The positioning data/block start data edit window appears. (Refer to Section 8.3.1/Section 8.5.1.)
4. Click the [Online] → [Test] → [Edit positioning data] menu ( ).
5. Edit the positioning data/block start data. (Refer to Section 8.3.1. / 8.5.1.)
6. Clicking the [Online] → [Test] → [Edit positioning data] menu ( ) shows the dialog box which confirms whether to write the edited data to the QD75/LD75/LD77 or not.
7. Click the "OK" button to write to the QD75/LD75/LD77 the positioning data or block start data changed in the test mode.
   When you click [Cancel], write to QD75/LD75/LD77 is not performed.

Point

If the Write data enable flag in Option is not made valid, the data changed or set in the test mode are not retained.
Make the Write data enable flag invalid when you do not change the positioning data on the peripheral device.

DISPLAY/SETTING SCREEN



Sample01 / QD75D4 / Positioning data Axis #1 (I/O : 0) [TEST MODE]Edit

No.	Pattern	CTRL method	SLV axis	ACC(ms)	DEC(ms)	Positioning address [pls]	Arc
1	1:CONT	1:ABS line1	-	0;1000	0;1000	9843	
2	1:CONT	1:ABS line1	-	0;1000	0;1000	20000	
3	0:END	1:ABS line1	-	0;1000	0;1000	5000	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

The data changed in the test mode are shown in green letters.

11.8 Wave Trace

Using the wave trace function in the trace mode, show the speed command (axis speed) for positioning operation as waveform data.
(Note that the QD75M, QD75MH and LD77 cannot be used.)

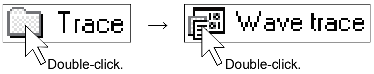
11.8.1 Wave trace condition setting

PURPOSE

To execute the wave trace, set the trace starting condition and the data to be traced.

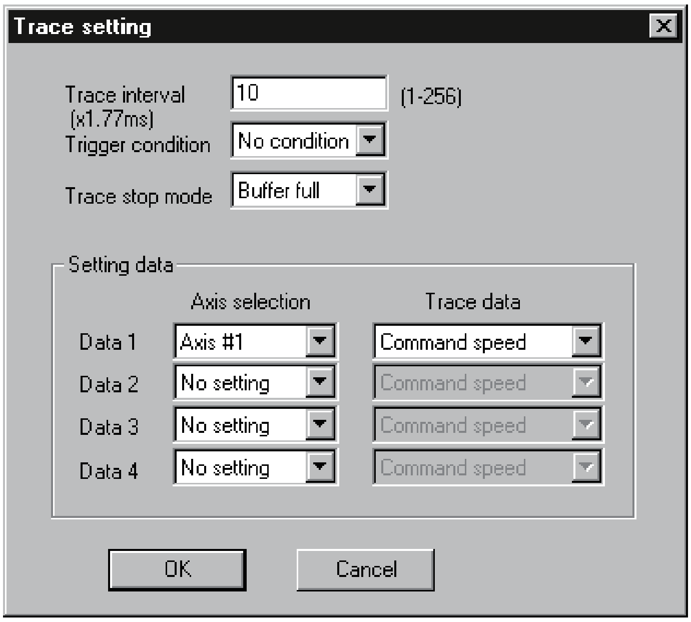
BASIC OPERATION

1. Choose Wave trace.



2. Click the "Setting" button in the wave trace window.
3. Set the Trace interval, Trace trigger, Stop condition, axis and data to be traced in the Trace setting dialog box.
4. Click the "OK" button in the Trace setting dialog box.
5. For the tracing operation that follows, refer to Section 11.8.2.

DISPLAY/SETTING SCREEN



Trace setting

Trace interval (x1.77ms): 10 (1-256)
Trigger condition: No condition
Trace stop mode: Buffer full

Setting data

	Axis selection	Trace data
Data 1	Axis #1	Command speed
Data 2	No setting	Command speed
Data 3	No setting	Command speed
Data 4	No setting	Command speed

DISPLAY/SETTING DATA

Item	Description
Trace interval	[For QD75P and QD75D projects] Set the trace interval within the range 1 to 256. The interval is the set value × 1.77ms. [For LD75 projects] Set the trace interval within the range 1 to 512. The interval is the set value × 0.88ms.
Trigger condition	Choose the actual trace starting condition. • No condition Trace starts at the start request of the peripheral device. • Wait start Trace actually starts when the start signal (X10/X11/X12/X13) turns on after the start request from the peripheral device.
Trace stop mode	Choose the trace stopping condition. • Buffer full Trace stops when the trace data area becomes full. • Endless Trace stops at the stop request of the peripheral device. • Error stop Trace stops when an error occurs. • Trace point [For QD75P and QD75D projects] Trace stops when the number of trace points reaches the specified value (1 to 8192). [For LD75 projects] Trace stops when the number of trace points reaches the specified value (1 to 16384).
Data 1 Data 2 Data 3 Data 4	Represents the trace data No.
Axis selection	Choose the axis whose data will be traced.
Trace data	Choose the data type to be traced. • Command speed Waveform data of the feed speed from the QD75P, QD75D and LD75 to the servo amplifier.
"OK" button	Click this button to close the Trace setting dialog box and display the axis number and data type in the wave trace window.

11.8.2 Wave trace execution

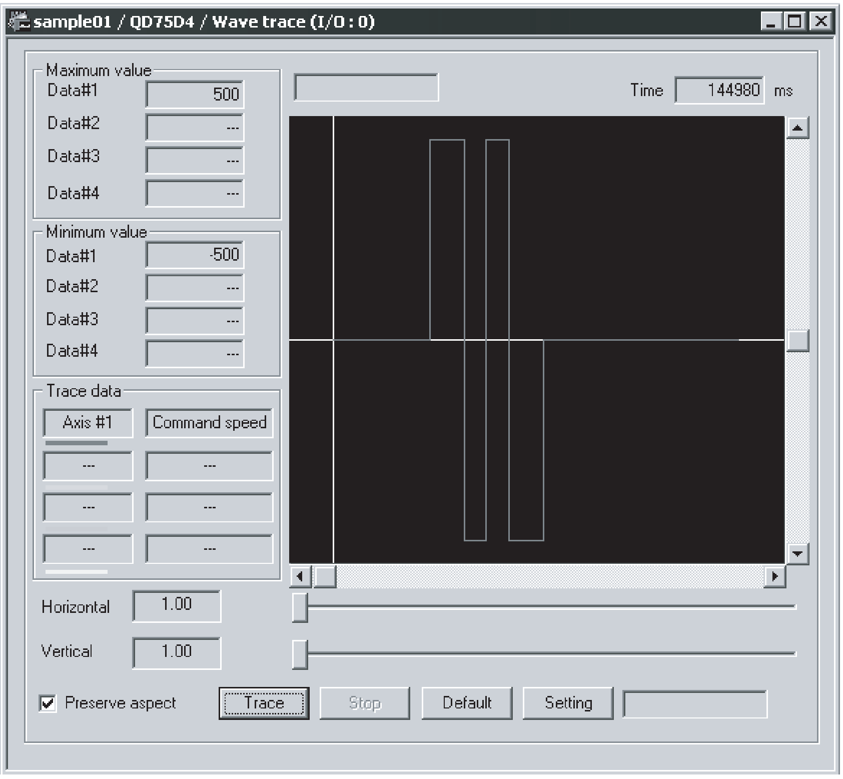
PURPOSE

Execute wave trace after setting the trace conditions in accordance with Section 11.8.1.

BASIC OPERATION

1. Perform the basic operation in Section 11.8.1 to set the trace conditions.
2. Click the "Trace" button to initialize trace.
3. When initialization is completed, click the "Start" button in the dialog box.
4. The trace data is read when the trace stop type condition is satisfied or the "Stop" button is clicked.
5. Check the QD75P, QD75D and LD75 control results from the displayed trace results.

DISPLAY/SETTING SCREEN



sample01 / QD75D4 / Wave trace (I/O : 0)

Maximum value
Data#1: 500
Data#2: ---
Data#3: ---
Data#4: ---

Minimum value
Data#1: -500
Data#2: ---
Data#3: ---
Data#4: ---

Time: 144980 ms

Trace data
Axis #1: Command speed
---: ---
---: ---
---: ---

Horizontal: 1.00
Vertical: 1.00

☑ Preserve aspect

DISPLAY/SETTING DATA

Item	Description
Maximum value Minimum value	Show the maximum and minimum values during tracing of each data.
Time	Shows the tracing time.
Waveform data	Shows the trace results. The horizontal axis indicates time. The vertical axis represents the value of the traced data. Use the scroll bars to move the display position.
Horizontal Vertical	Show the display multiplying factor of the waveform data. Move ─├ to the right to enlarge or to the left to reduce.
Preserve aspect	Check this check box to make the waveform data display multiplying factor equal in the vertical and horizontal directions.
Trace data	Shows the axes and data types set in the Trace setting dialog box.
"Trace" button	Click this button to initialize trace. On completion of initialization, the "Start" button in the dialog box is made valid. Clicking the "Start" button gives a trace start request to the QD75P, QD75D and LD75. If the trigger condition is "No condition", trace starts. If the trigger condition is other than "No condition", trace actually starts when the trigger condition holds.
"Stop" button	Click this button to stop trace and show the trace results. If the stop condition is Buffer full, Error stop or Trace point, clicking the "Stop" button stops trace and shows the trace results available at that point.
"Default" button	Click this button to update the display to the latest trace data.
"Setting" button	Click this button to display the Trace condition dialog box.

HELPFUL OPERATION

Clicking the [Project] → [Export file] → [File writing of Trace data] menu saves the trace data and trace conditions.
To read the trace data file, perform the following operation.

1. In the Select module type dialog box (refer to Section 11.1.2), choose the same model as the one at the time of write.
2. Display the wave trace window.
3. Click the [Project] → [Import file] → [File reading of Trace data] menu.
4. Click the "OK" button in the on-screen trace data overwrite confirmation dialog box.
5. Choose the file location and file name in the file opening dialog box and click the "Open" button to show the saved waveform data and trace conditions.

Point

- Read a waveform trace file while the Wave trace window is displayed.
- When the number of trace points is great, acquisition of trace data may take time.
- The trace data files of QD75P/QD75D and those of LD75 differ in the file extension, and they are not compatible.

Positioning module	Extension
QD75P/QD75D	.wtr
LD75	.wtl

11.9 Location Trace

Using the location trace function in the trace mode, show 2-axis interpolation control or simultaneous start (2 axes) as locus data.
(Note that the QD75M, QD75MH and LD77 cannot be used.)

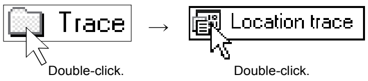
11.9.1 Location trace condition setting

PURPOSE

To execute the location trace, set the trace starting condition and the data to be traced.

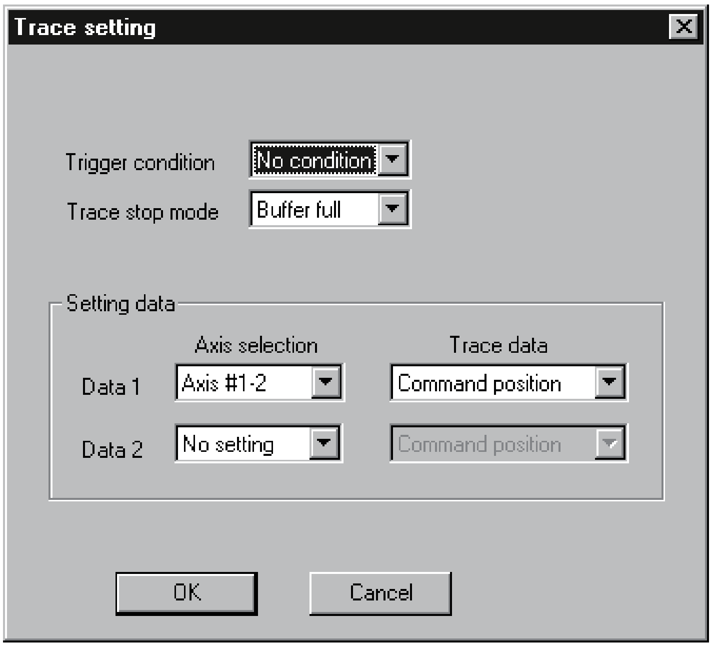
BASIC OPERATION

1. Choose Location trace.



2. Click the "Setting" button in the Location trace window.
3. Set the Trace trigger, Stop condition, and axis and data to be traced in the Trace setting dialog box.
4. Click the "OK" button in the Trace setting dialog box.
5. For the tracing operation that follows, refer to Section 11.9.2.

DISPLAY/SETTING SCREEN



Trace setting

Trigger condition: No condition
Trace stop mode: Buffer full

Setting data

	Axis selection	Trace data
Data 1	Axis #1-2	Command position
Data 2	No setting	Command position

DISPLAY/SETTING DATA

Item	Description
Trigger condition	Choose the actual trace starting condition. • No condition Trace starts at the start request of the peripheral device. • Wait start Trace actually starts when the start signal (X10/X11/X12/X13) turns on after the start request from the peripheral device.
Trace stop mode	Choose the trace stopping condition. • Buffer full Trace stops when the trace data area becomes full. • Endless Trace stops at the stop request of the peripheral device. • Error stop Trace stops when an error occurs. • Trace point [For QD75P and QD75D projects] Trace stops when the number of trace points reaches the specified value (1 to 8192). [For LD75 projects] Trace stops when the number of trace points reaches the specified value (1 to 16384).
Data 1 Data 2	Represents the trace data No.
Axis selection	Choose the combination of the axes whose data will be traced. In the locus data of the trace results, the fist axis number is for the horizontal axis and the latter axis number is for the vertical axis. When you selected "#1-#4", #1 is for the horizontal axis and #4 for the vertical axis.
Trace data	Choose the data type to be traced. • Command position Locus data of the feed address from the QD75P, QD75D and LD75 to the servo amplifier.
"OK" button	Click this button to close the Trace setting dialog box and display the axis numbers and data types in the Location trace window.

11.9.2 Location trace execution

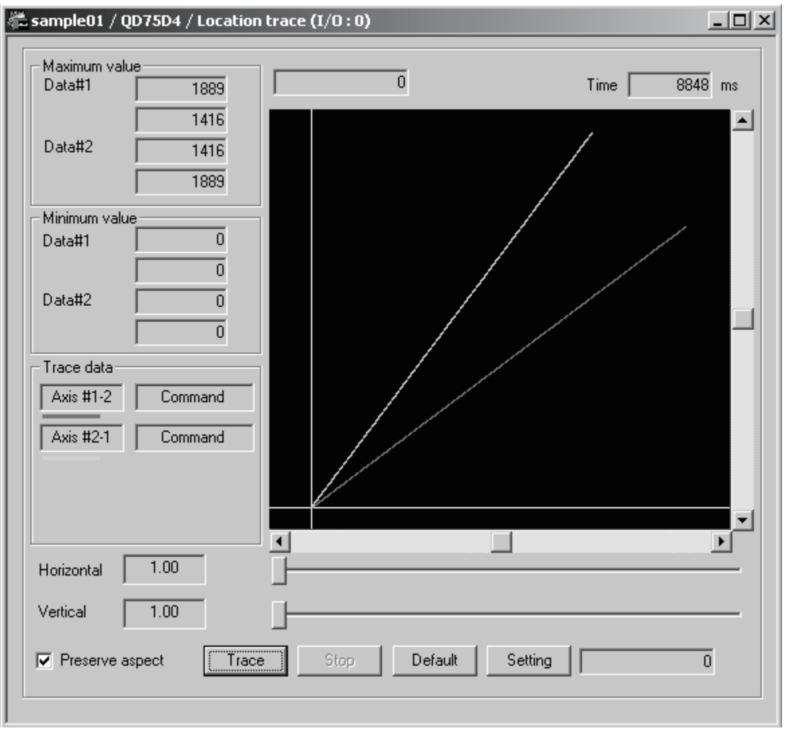
PURPOSE

Execute location trace after setting the trace conditions in accordance with Section 11.9.1.

BASIC OPERATION

1. Perform the basic operation in Section 11.9.1 to set the trace conditions.
2. Click the "Trace" button to initialize trace.
3. When initialization is completed, click the "Start" button in the dialog box.
4. The trace data is read when the trace stop type condition is satisfied or the "Stop" button is clicked.
5. Check the QD75P, QD75D and LD75 control results from the displayed trace results.

DISPLAY/SETTING SCREEN



DISPLAY/SETTING DATA

Item	Description
Maximum value Minimum value	Show the maximum and minimum values during tracing of each data.
Time	Shows the tracing time.
Locus data	Shows the trace results. The horizontal and vertical axes indicate the respective addresses (travel distances) of the axis numbers set in trace condition setting. (When #1-#2 is selected as the axis number to be traced, the horizontal axis is Axis #1 and the vertical axis is Axis #2.) Use the scroll bars to move the display position.
Horizontal Vertical	Show the display multiplying factor of the locus data. Move ├ to the right to enlarge or to the left to reduce.
Preserve aspect	Check this check box to make the locus data display multiplying factor equal in the vertical and horizontal directions.
Trace data	Shows the axes and data types set in the Trace setting dialog box.
"Trace" button	Click this button to initialize trace. On completion of initialization, the "Start" button in the dialog box is made valid. Clicking the "Start" button gives a trace start request to the QD75P, QD75D and LD75. If the trigger condition is "No condition", trace starts. If the trigger condition is "Wait start", trace actually starts when the trigger condition holds.
"Stop" button	Click this button to stop trace and show the trace results. If the stop condition is Buffer full, Error stop or Trace point, clicking the "Stop" button stops trace and shows the trace results available at that point.
"Default" button	Click this button to update the display to the latest trace data.
"Setting" button	Click this button to display the Trace condition dialog box.

HELPFUL OPERATION

Clicking the [Project] → [Export file] → [File writing of Trace data] menu saves the trace data and trace conditions.
To read the trace data file, perform the following operation.

1. In the Select module type dialog box (refer to Section 11.1.2), choose the same model as the one at the time of write.
2. Display the Location trace window.
3. Click the [Project] → [Import file] → [File reading of Trace data] menu.
4. Click the "OK" button in the on-screen trace data overwrite confirmation dialog box.
5. Choose the file location and file name in the file opening dialog box and click the "Open" button to show the saved locus data and trace conditions.

Point

- Read a location trace file while the Location trace window is displayed.
- When the number of trace points is great, acquisition of trace data may take time.
- The trace data files of QD75P/QD75D and those of LD75 differ in the file extension and they are not compatible.

Positioning module	Extension
QD75P/QD75D	.wtr
LD75	.wtl

11.10 Help

PURPOSE

With the help function, you can check the following.

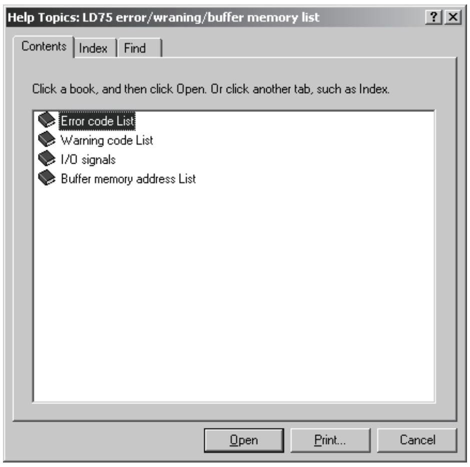
- Error/Warning/List of Buffer memory
  Details and actions of error codes/warning codes and the buffer memory address list of the QD75/LD75/LD77• Key operations list
- Key operations list
  List of GX Configurator-QP operation methods from the keyboard
- About
  Version of GX Configurator-QP
- Connection to MELFANS web

BASIC OPERATION

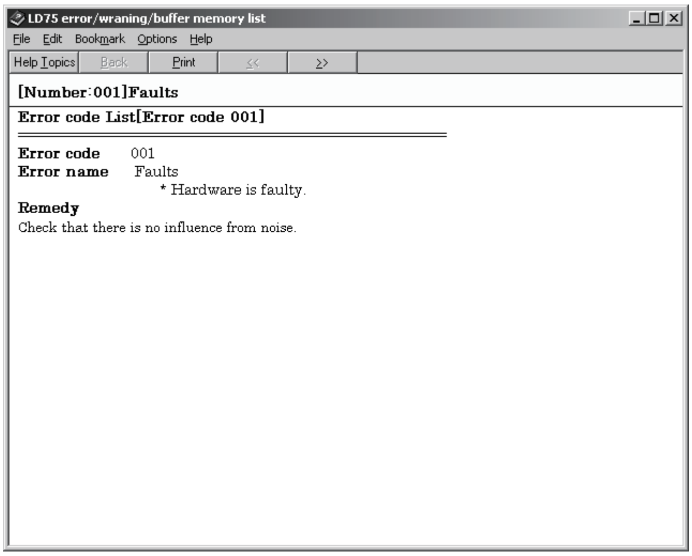
1. Click the [Help] menu.
2. Choose an item to be checked from the following menus.
   - QD75 error/warning/buffer memory list
   - LD75 error/warning/buffer memory list
   - LD77 error/warning/buffer memory list
   - Key operations list
   - About
   - Connection to MELFANS web

DISPLAY/SETTING SCREEN

[Error/Warning/Buffer memory List example]



Click a book, and then click Open. Or click another tab, such as Index.



[Number:001]Faults

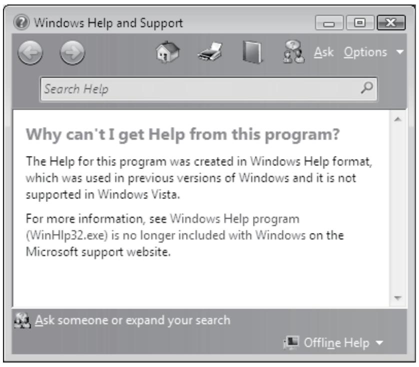
Error code List[Error code 001]

Error code 001
Error name Faults
* Hardware is faulty.
Remedy
Check that there is no influence from noise.

Point

For Windows Vista® and Windows® 7, not the Help screen but the following "Windows Help and Support" window may be displayed.
Perform the following procedure to install "WinHlp32.exe" which is needed to display the Help screen. (Note: The personal computer needs to be connected to the internet.)

[Windows Vista®]

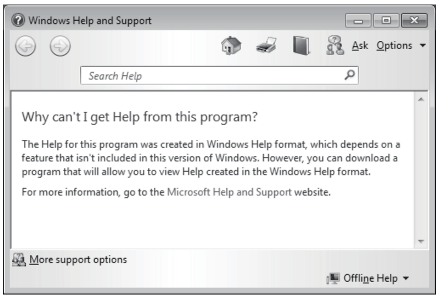


Why can't I get Help from this program?

The Help for this program was created in Windows Help format, which was used in previous versions of Windows and it is not supported in Windows Vista.

For more information, see Windows Help program (WinHlp32.exe) is no longer included with Windows on the Microsoft support website.

[Windows® 7]



Why can't I get Help from this program?

The Help for this program was created in Windows Help format, which depends on a feature that isn't included in this version of Windows. However, you can download a program that will allow you to view Help created in the Windows Help format.

For more information, go to the Microsoft Help and Support website.

(1) Click the "Help" button.

(2) The screen shown left opens. Click the link section.

(3) The Microsoft Support Knowledge Base page opens.
(http://support.microsoft.com/kb/917607/en-us)
Following the instructions, download Windows Help program for Windows Vista® (WinHlp32.exe) or Windows Help program for Windows® 7 (WinHlp32.exe).

(4) Install the file that has been downloaded.

APPENDICES

Appendix 1 Read from Module/Write to Module Reference Processing Times

The following table indicates reference time required for read/write processing from GX Configurator-QP to the positioning module.

Item		Description
Positioning module		QD75MH
Peripheral device	CPU	Pentium® Ⅲ 933MHz, Microsoft® Windows® 2000 Professional Operating System
	Memory	64MB
	Interface	Serial port
	Transfer speed	9600bps, 19200bps, 115200bps
Read/write data	Positioning data	Axis #1 to #4: No. 1 to 600 each
	Block start data	Axis #1 to #4: Block No. 0 to 4 each
	Parameters	Axis #1 to #4
	Servo parameters	Axis #1 to #4

- Write (QCPU direct connection)

  Transfer speed 9600bps : 1 minute 32 seconds
  19200bps : 47 seconds
  115200bps : 17 seconds

- Read (QCPU direct connection)

  Transfer speed 9600bps : 1 minute 32 seconds
  19200bps : 58 seconds
  115200bps : 17 seconds

Appendix 2 Restrictions Depending on Function Version of QD75

Note that the following functions are invalid when the function version "B" or later of the QD75 is not used.
To confirm the function version of the QD75, refer to "Section 7.3 Checking the Positioning Module Function Version (OS Information)".

Item	Description
Connection setup	Specify the PLC No. of the multi PLC system ∗1 (for multi PLC system).
Parameter	Make parameter setting for speed-position switching control (ABS mode). <Speed-position function selection>
Monitoring signal	Monitor the signals for the pre-reading start function ∗2. <Y14 to 17: Axis #1 to #4 execution prohibition flags>

∗1: For details, refer to the QCPU (Q Mode) User's Manual (Function Description/Program Basic).

∗2: For details, refer to the following.
- Type QD75P/QD75D Positioning Module User's Manual (SH-080058-B or later)
- Type QD75M Positioning Module User's Manual (Details)
- Type QD75MH Positioning Module User's Manual (Details)

Appendix 3 Functions Added to/Changed from the Previous Versions

The following table indicates the functions of the latest GX Configurator-QP version that are not available for SW0D5C-QD75P-E or that have been changed from those of SW0D5C-QD75P-E.

Applicable Version∗	Added to /Changed Function	Description	Refer To
GX Configurator-QP Version 2.10L	Change module type	QD75M is supported.	—
	Servo parameters	The function to edit the servo parameters is added.	Section 8.2
	Read/write/verify	The function to read/write/verify the servo parameters is added.	Section 9.1
	Monitor	The function to monitor the servo status, torque control/servo load ratio, servo parameter setting contents and servo parameter error is added.	Section 10.2.6
	Servo amplifier data read	The function to read the servo parameter data used in the servo amplifier to the QD75M buffer memory is added.	Section 9.2
	Servo On/Off	The function to switch off the electromagnetic brakes of the servo motor to bring the servo motor into a free run status is added.	Section 10.5
	Print	The function to print the servo parameters is added.	Section 11.6.2
	Applicable programmable controller CPU	"Q00JCPU, Q00CPU, Q01CPU" are added.	Chapter 1
	Operating environment	• The PC CPU module is added to the peripheral devices. • Microsoft® Windows® Millennium Edition Operating System (English Version) is added to the operating systems. • Microsoft® Windows® 2000 Professional Operating System (English Version) is added to the operating systems.	Section 2.2
	License key FD	The license key FD that was required for installation is disused.	—
GX Configurator-QP Version 2.13P	Applicable programmable controller CPU	"Q12PHCPU, Q25PHCPU" are added.	Chapter 1
	Servo parameters	• When the MR-J2S-B is selected as the servo series, "B: MR-RB31, C:MR-RB51" are added to the regenerative brake options. • When the MR-J2S-B is selected as the servo series, "Zeroing condition setting selection" is added.	Section 8.2
GX Configurator-QP Version 2.14Q	Connection Setup	In the PLC side setting, a change has been made to select "Remote I/O" using "PLC type".	Section 7.1
	Multi module batch write	• A change has been made to automatically display the dialog box for selecting the items to be written to the module when the write target project is selected.	Section 11.1.4
GX Configurator-QP Version 2.15R	Operating environment	• Microsoft® Windows® XP Professional Operating System (English Version) is added to the operating systems. • Microsoft® Windows® XP Home Edition Operating System (English Version) is added to the operating systems.	Section 2.2
GX Configurator-QP Version 2.18U	Servo parameters	MR-J2S-B servo series parameters are added/changed.	Section 8.2
GX Configurator-QP Version 2.20W	Change module type	QD75MH is supported	—
	Servo parameters	MR-J3 servo series parameters are added.	Section 8.2
GX Configurator-QP Version 2.25B	Applicable programmable controller CPU	"Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU" are added.	Chapter 1

∗ : The applicable version can be confirmed in Product information. For details, refer to "Section 11.10 Help".

Applicable Version＊	Added to /Changed Function	Description	Refer To
GX Configurator-QP Version 2.27D	Operating environment	• Microsoft® Windows Vista® Home Basic Operating System is added to the operating systems. • Microsoft® Windows Vista® Home Premium Operating System is added to the operating systems. • Microsoft® Windows Vista® Business Operating System is added to the operating systems. • Microsoft® Windows Vista® Ultimate Operating System is added to the operating systems. • Microsoft® Windows Vista® Enterprise Operating System is added to the operating systems.	Section 2.2
GX Configurator-QP Version 2.29F	Applicable programmable controller CPU	"Q02PHCPU, Q06PHCPU, Q13UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU, Q26UDEHCPU" are added.	Chapter 1
	Servo parameters	• MR-J3 full closed servo series parameters are added. • MR-J3 servo linier series parameters are added.	—
GX Configurator-QP Version 2.30G	Connection Setup	• "Ethernet direct" is added to the personal computer side interface. • The default value of "Timeout time" for "RS232-C" or "USB" setting is changed to 10 seconds.	Section 7.1
	Servo parameters	The method for executing the default (initial) settings for each servo amplifier series selected is changed.	Chapter 1
GX Configurator-QP Version 2.32J	Applicable programmable controller CPU	• "Q00UJCPU, Q00UCPU, Q01UCPU, Q10UDHCPU, Q20UDHCPU, Q10UDEHCPU, and Q20UDEHCPU" are added. • C Controller module, "Q12DCCPU-V" is added.	Chapter 1
	Connection setup	The GOT transparent mode is added.	Section 7.1.1
GX Configurator-QP Version 2.34L	Change module type	LD75P4, LD75D4, and LD77MH4 are supported.	—
	Applicable programmable controller CPU	L02CPU and L26CPU-BT are added.	Chapter 1
	Operating environment	• Microsoft® Windows ® 7 Starter Operating System is added to the operating systems. • Microsoft® Windows ® 7 Home Premium Operating System is added to the operating systems. • Microsoft® Windows ® 7 Professional Operating System is added to the operating systems. • Microsoft® Windows ® 7 Ultimate Operating System is added to the operating systems. • Microsoft® Windows ® 7 Enterprise Operating System is added to the operating systems.	Section 2.2
GX Configurator-QP Version 2.35M	Operating Environment	64-bit Windows® 7 is supported.	Section 2.2

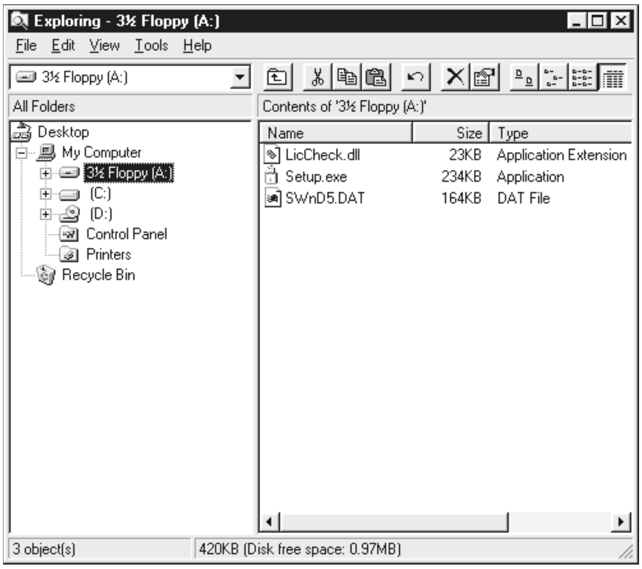
＊ : The applicable version can be confirmed in Product information. For details, refer to "Section 11.10 Help".

Appendix 4 Uninstalling the License Key FD

At installation of this product, uninstall the license key FD if the license key FD of an older version of GX Configurator-QP is valid.
If the license key FD remains valid, this product can be installed but the license right of the older version of GX Configurator-QP is decreased by 1.

Point

Uninstallation of the license key FD requires the same license key FD as used for installation.

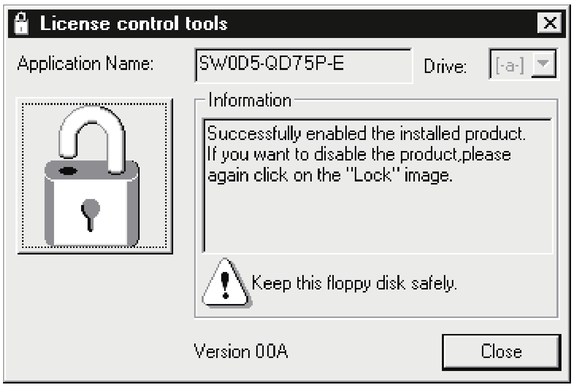


Name	Size	Type
LicCheck.dll	23KB	Application Extension
Setup.exe	234KB	Application
SWnD5.DAT	164KB	DAT File

3 object(s) 420KB (Disk free space: 0.97MB)

1) Start Explorer and click the drive where the license key FD is inserted.
Double-click "Setup.exe".
To display Explorer, choose [Start] → [Programs] → [Windows Explorer].

↓



Application Name: SW0D5-QD75P-E Drive: [-a-]

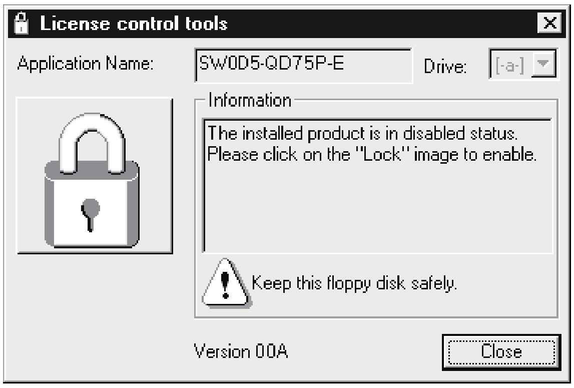
Successfully enabled the installed product.
If you want to disable the product,please again click on the "Lock" image.

Keep this floppy disk safely.

Version 00A

2) Click the picture of the open lock.

↓



Application Name: SW0D5-QD75P-E Drive: [-a-]

The installed product is in disabled status.
Please click on the "Lock" image to enable.

Keep this floppy disk safely.

Version 00A

3) Click the "Close" button.

Appendix 5 Parameter Names Shown in GX Configurator-QP Screens and Manuals

Since the parameter names of the existing software are employed for GX Configurator-QP, some parameter names shown in GX Configurator-QP screens may differ from those written in the user's manual for the positioning module used.
The following table lists parameter names shown in GX Configurator-QP screens and user's manual for the positioning module used.

GX Configurator-QP screen		User's manual for the positioning module used	
Parameter type	Parameter name	Parameter type	Parameter name
Basic parameter 1	Unit	Basic parameters 1	Unit setting
	Pulse per rotation		No. of pulses per rotation
	Travel per rotation		Movement amount per rotation
	Unit magnification		Unit magnification
	Pulse output mode		Pulse output mode
	Rotation direction		Rotation direction setting
	Bias speed at start		Bias speed at start
Basic parameter 2	Speed limit	Basic parameters 2	Speed limit value
	ACC time #0		Acceleration time 0
	DEC time #0		Deceleration time 0
Extended parameter 1	Backlash compensation	Detailed parameters 1	Backlash compensation amount
	S/W stroke LMT HIGH		Software stroke limit upper limit value
	S/W stroke LMT LOW		Software stroke limit lower limit value
	S/W stroke LMT select		Software stroke limit selection
	JOG&MPG stroke limit		Software stroke limit valid/invalid setting
	Command in-position		Command in-position width
	Torque limit		Torque limit setting value
	M code ON output		M code ON signal output timing
	Speed switching mode		Speed switching mode
	Interpolation speed mode		Interpolation speed designation method
	Address update in V-control		Current feed value during speed control
	Lower limit		Input signal logic selection: Lower limit
	Upper limit		Input signal logic selection: Upper limit
	Drive unit READY		Input signal logic selection: Drive unit READY
	Stop signal		Input signal logic selection: Stop signal
	External command		Input signal logic selection: External command

GX Configurator-QP screen		User's manual for the positioning module used	
Parameter type	Parameter name	Parameter type	Parameter name
Extended parameter 1	Zero signal	Detailed parameters 1	Input signal logic selection: Zero signal
	Near-point dog signal		Input signal logic selection: Near-point (dog) signal
	MPG		Input signal logic selection: Manual pulse generator input
	Command pls signal		Output signal logic selection: Command pulse signal
	DCC		Output signal logic selection: Deviation counter clear
	External input selection		External input signal selection
	MPG mode		Manual pulse generator input selection
	Speed-position function selection		Speed-position function selection
	Forced stop selection		Forced stop valid/invalid selection
Extended parameter 2	ACC time #1	Detailed parameters 2	Acceleration time 1
	ACC time #2		Acceleration time 2
	ACC time #3		Acceleration time 3
	DEC time #1		Deceleration time 1
	DEC time #2		Deceleration time 2
	DEC time #3		Deceleration time 3
	JOG speed limit		JOG speed limit value
	JOG ACC time		JOG operation acceleration time selection
	JOG DEC time		JOG operation deceleration time selection
	ACC/DEC set		Acceleration/deceleration process selection
	S-curve ratio		S-curve ratio (S-pattern ratio)
	Sudden stop DEC time		Sudden stop deceleration time
	Stop group #1 Sudden stop		Stop group 1 sudden stop selection
	Stop group #2 Sudden stop		Stop group 2 sudden stop selection
	Stop group #3 Sudden stop		Stop group 3 sudden stop selection
	Positioning complete signal		Positioning complete signal output time
	Cir.arc error allowance		Allowable circular interpolation error width
	External command function		External command function selection

GX Configurator-QP screen		User's manual for the positioning module used	
Parameter type	Parameter name	Parameter type	Parameter name
Detailed parameter 2	Speed control 10x multiplier device for degree axis	Detailed parameters 2	Speed control 10x multiplier setting for degree axis
	Restart allowable range when servo OFF → ON		Restart allowable range when servo OFF to ON
OPR basic parameter	OPR method	OPR basic parameters	OPR method
	OPR direction		OPR direction
	OP address		OP address
	OPR speed		OPR speed
	Creep speed		Creep speed
	OPR retry		OPR retry
OPR extended parameter	OPR dwell time	OPR detailed parameters	OPR dwell time
	Travel setting after DOG ON		Setting for the movement amount after near-point dog ON
	OPR ACC time		OPR acceleration time selection
	OPR DEC time		OPR deceleration time selection
	OP shift amount		OP shift amount
	OPR torque limit value		OPR torque limit value
	Deviation command signal out time		Deviation counter clear signal output time
	Operation setting for home position return incomplete		Operation setting for incompletion of OPR
	OP shift speed specification		Speed designation during OP shift
	Dwell time during OPR retry		Dwell time during OPR retry

INDEX

GX Configurator-QP Version 2

Operating Manual

MODEL	SW2D5C-QD75P-O-E
MODEL CODE	13JU19
SH(NA)-080172-O(1205)MEE	

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN

When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.